ORDER FOR SUPPLIES AND SERVICES

IMPORTANT: See instructions in GSAR 553.370-300-1 for distribution

1. DATE OF ORDER	2. ORDER NUMBER	3. CONTRACT NUMBER	4. ACT NUMBER
02/17/2017 07:53:00 PM	GSQ0017AJ0019	GS00Q09BGD0025	21434820

5. ACCOUNTING CLASSIFICATION / 6. FINANCE DIVISION

FOR GOVERNMENT USE ONLY							
	FUND **285F**	ORG CODE **Q00FB000**	B/A CODE **AA10**	O/C CODE **25**	AC	SS	VENDOR NAME **CSRA LLC**
	FUNC CODE **AF151**	C/E CODE **H08**	PROJ./PROS. NO.	CC-A	MDL	FI	G/L DEBT
	W/ITEM	CC-B	PRT./CRFT		AI	LC	DISCOUNT

7. TO: CONTRACTOR (Name, address and zip code)
CSRA LLC
3170 FAIRVIEW PARK DR
FALLS CHURCH, VA, 22042-4516
Phone: (703) 641-2000 Fax: 619-225-2444

8. TYPE OF ORDER   REFERENCE YOUR

[X] A. PURCHASE

Please furnish the following on the terms specified on both sides of the order and the attached sheets, if any, including delivery as indicated.

[ ] B. DELIVERY

This delivery order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above numbered contract.

C. MODIFICATION NO. **00**   AUTHORITY FOR ISSUING **FAR 16.505**

Except as provided herein, all terms and conditions of the original order, as heretofore modified, remain unchanged.

9A. EMPLOYER'S IDENTIFICATION NUMBER
473093524

9B. CHECK, IF APPROP.
[ ] WITHHOLD 20%

10A. CLASSIFICATION
For-Profit Organization

10B. TYPE OF BUSINESS ORGANIZATION
[X] A. CORPORATION   [ ] B. PARTNERSHIP   [ ] C. SOLE

11. ISSUING OFFICE (Address, zip code, and telephone no.)
GSA/FEDSIM Acquisition (QF0BCA)
1800 F Street, NW, 3100
Washington, DC 20405
Contract Specialist Name Andrew S PriceGibson
Contract Specialist Phone 202-603-6390

12. REMITTANCE ADDRESS (MANDATORY)
CSRA LLC
P.O. Box 419161
Boston, MA 02241-9150
United States

13. SHIP TO (Consignee address, zip code and telephone no.)

14. PLACE OF INSPECTION AND ACCEPTANCE
f.o.b destination

15. REQUISITION OFFICE (Name, symbol and telephone no.)
Civilian 1 - James W. McGalliard
jim.mcgalliard@gsa.gov
Phone: 703-605-2770

16. F.O.B. POINT	17. GOVERNMENT B/L NO.	18. DELIVERY F.O.B. POINT ON OR BEFORE	19. PAYMENT/DISCOUNT TERMS
Destination			Net Days: 30, Discount Days: 0, Discount Percentage: 0.0

20. SCHEDULE

ITEM NO. (A)	SUPPLIES OR SERVICES (B)	QUANTITY ORDERED (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
0001	Labor (Task 1) FFP	1.0	Lot	(b) (4)	
0002	Labor (Tasks 2-5) CPFF	1.0	Lot		
0003	Long-Distance Travel Including Indirect Handling Rate (CR)	1.0	Lot		
0004	Ancillary Products/Services* Including Indirect Handling Rate (CR)	1.0	Lot		
0005	Contract Access Fee (CAF)	1.0	Lot		

21. RECEIVING OFFICE (Name, symbol and telephone no.)
See Block 13

TOTAL FROM 300-A(s)

22. SHIPPING POINT
See Block 7

23. GROSS SHIP WT.

GRAND TOTAL   **$2,853,279.00**

24. MAIL INVOICE TO: (Electronic Invoice Preferred)
General Services Administration (FUND)
The contractor shall follow these Invoice Submission Instructions. The contractor shall submit invoices electronically by logging into the ASSIST portal (https //portal.fas.gsa.gov), navigating to the appropriate order, and creating the invoice for that order. For additional assistance contact the ASSIST Helpdesk at 877-472-4877. Do NOT submit any invoices directly to the GSA Finance Center (neither by mail nor via electronic submission).

25A. FOR INQUIRIES REGARDING PAYMENT CONTACT:
GSA Finance Customer Support

25B. TELEPHONE NO.
817-978-2408

26A. NAME OF CONTRACTING/ORDERING OFFICER (Type)
Brendan J. McDonough

26B. TELEPHONE NO.
703-605-3655

26C. SIGNATURE
Brendan J. McDonough

1. DATE OF ORDER 02/17/2017 07:53:00 PM	2. ORDER NUMBER GSQ0017AJ0019	3. CONTRACT NUMBER GS00Q09BGD0025	4. ACT NUMBER 21434820

Period Of Performance

Start:	02/17/2017
End:	02/16/2018

Contract Section Comments

Please see attached documentation for details on task order award.

TASK ORDER (TO)

GSQ0017AJ0019

High-End Scientific Computing (HESC) Support Services

in support of:

Environmental Protection Agency

Issued to:
CSRA LLC.
3170 Fairview Park Drive
Falls Church, Virginia 22042

Awarded under the GSA Alliant
Government-wide Acquisition Contract
GS00Q09BGD0025

Issued by:
The Federal Systems Integration and Management Center (FEDSIM)
1800 F Street, NW (QF0B)
Washington, D.C. 20405

Award Date: February 17, 2017

FEDSIM Project Number: EP00808

SECTION B – SUPPLIES OR SERVICES AND PRICES/COSTS

B.1 GENERAL

The work shall be performed in accordance (IAW) with all Sections of this Task Order (TO) and the contractor's Basic Contract, under which the resulting TO will be placed. An acronym listing to support this TO is included in Section J, Attachment H.

B.2 CONTRACT ACCESS FEE (CAF)

The GSA's operating costs associated with the management and administration of this contract are recovered through a CAF. In accordance with the Alliant base contract, the CAF shall be 0.75 percent of the total TO value with a cap of $100,000 per year per order (when the order is in excess of $13.3M per order year). This TO shall have a separate Contract Line Item Number (CLIN) to cover this access fee, and this CAF shall be obligated at TO award.

B.3 ORDER TYPES

The contractor shall perform the effort required by this TO on a Firm Fixed Price (FFP) basis for CLINs 0001, 1001, 2001, 3001, and 4001, a Cost Plus Fixed Fee (CPFF) term basis for 0002, 1002, 2002, 3002, and 4002, a Cost Reimbursable (CR) basis for CLINs 0003, 1003, 2003, 3003, 4003, 0004, 1004, 2004, 3004, 4004, 0005, 1005, 2005, 3005, and 4005. The work shall be performed IAW all Sections of this TO and the offeror's Basic Contract.

B.4 SERVICES AND PRICES/COSTS

Long-distance travel is defined as travel over 50 miles from Research Triangle Park (RTP), North Carolina (NC). Local travel will not be reimbursed.

The following abbreviations are used in this price schedule:

CAF	Contract Access Fee
CLIN	Contract Line Item Number
CPFF	Cost-Plus-Fixed-Fee
FFP	Firm-Fixed-Price
NTE	Not-to-Exceed
QTY	Quantity

B.5 SECTION B TABLES

 B.5.1 BASE PERIOD:

MANDATORY FIRM FIXED PRICE (FFP) LABOR CLIN

CLIN	Description	QTY	Unit	Total Firm Fixed Price
0001	Labor (Task 1)	1 (12)	*Lot* (month)	(b) (4)

MANDATORY CPFF TERM LABOR CLIN

CLIN	Description	Level of Effort/ # of Hours	Cost	Fixed Fee	Total CPFF
0002	Labor (Tasks 2-5)	(b) (4)	(b) (4)	(b) (4)	(b) (4)

COST REIMBURSEMENT TRAVEL and ANCILLARY PRODUCTS/SERVICES CLINs

CLIN	Description		Total NTE Price
0003	Long-Distance Travel Including Indirect Handling Rate (b) (4)	NTE	(b) (4)
0004	Ancillary Products/Services* Including Indirect Handling Rate	NTE	(b) (4)

* Ancillary Products may include items such as hardware, software tools, network components, racks, cable plant, power distribution devices, cooling, generators, and other similar data center items. Standalone fire, smoke, and water detectors and fire suppression equipment are *not* the contractor's responsibility. Ancillary Products may be Commercial off-the-Shelf (COTS) or custom (non-commercial) products. Ancillary Services may include such services as hardware installation, warranties, maintenance agreements, product technical support, and service desk services, and other similar services. Ancillary Services also include cloud and grid services, platform as a service, infrastructure as a service, software as a service, computation services, storage and peripheral device services, network connectivity, and other similar information Technology (IT) services.

The indirect handling rate is (b) (4) Other Direct Costs and (b) (4) for Direct Materials.

CONTRACT ACCESS FEE (CAF)

CLIN	Description		Total Ceiling Price
0005	Contract Access Fee	NTE	(b) (4)

TOTAL CEILING BASE PERIOD CLINs: **$9,098,350**

B.5.2   FIRST OPTION PERIOD:

MANDATORY FFP LABOR CLIN

CLIN	Description	QTY	Unit	Total Firm Fixed Price
1001	Labor (Task 1)	1 (12)	*Lot* (month)	(b) (4)

MANDATORY CPFF TERM LABOR CLIN

CLIN	Description	Level of Effort/ # of Hours	Cost	Fixed Fee	Total CPFF
1002	Labor (Tasks 2-5)	(b) (4)	(b) (4)	(b) (4)	(b) (4)

COST REIMBURSEMENT TRAVEL and ANCILLARY PRODUCTS/SERVICES CLINs

CLIN	Description		Total NTE Price
1003	Long-Distance Travel Including Indirect Handling Rate(b) (4)	NTE	(b) (4)
1004	Ancillary Products/Services* Including Indirect Handling Rate	NTE	(b) (4)

CAF

CLIN	Description		Total Ceiling Price
1005	Contract Access Fee	NTE	(b) (4)

TOTAL CEILING FIRST OPTION PERIOD CLINs: $10,569,207

SECTION B – SUPPLIES OR SERVICES AND PRICES/COSTS

B.5.3 SECOND OPTION PERIOD:

MANDATORY FFP LABOR CLIN

CLIN	Description	QTY	Unit	Total Firm Fixed Price
2001	Labor (Task 1)	1 (12)	*Lot* (month)	(b) (4)

MANDATORY CPFF TERM LABOR CLIN

CLIN	Description	Level of Effort/ # of Hours	Cost	Fixed Fee	Total CPFF
2002	Labor (Tasks 2-5)	(b) (4)	(b) (4)	(b) (4)	(b) (4)

COST REIMBURSEMENT TRAVEL and ANCILLARY PRODUCTS/SERVICES CLINs

CLIN	Description		Total NTE Price
2003	Long-Distance Travel Including Indirect Handling Rate (b) (4)	NTE	(b) (4)
2004	Ancillary Products/Services* Including Indirect Handling Rate	NTE	(b) (4)

CAF

CLIN	Description		Total Ceiling Price
2005	Contract Access Fee	NTE	(b) (4)

TOTAL CEILING SECOND OPTION PERIOD CLINs: $12,064,170

B.4.4   THIRD OPTION PERIOD:

MANDATORY FFP LABOR CLIN

CLIN	Description	QTY	Unit	Total Firm Fixed Price
3001	Labor (Task 1)	1 (12)	*Lot* (month)	(b) (4)

MANDATORY CPFF TERM LABOR CLIN

CLIN	Description	Level of Effort/ # of Hours	Cost	Fixed Fee	Total CPFF
3002	Labor (Tasks 2-5)	(b) (4)	(b) (4)	(b) (4)	(b) (4)

COST REIMBURSEMENT TRAVEL and ANCILLARY PRODUCTS/SERVICES CLINs

CLIN	Description		Total NTE Price
3003	Long-Distance Travel Including Indirect Handling Rate (b) (4)	NTE	(b) (4)
3004	Ancillary Products/Services* Including Indirect Handling Rate	NTE	(b) (4)

CAF

CLIN	Description		Total Ceiling Price
3005	Contract Access Fee	NTE	(b) (4)

TOTAL CEILING THIRD OPTION PERIOD CLINs: **$12,942,980**

B.5.5 FOURTH OPTION PERIOD:

MANDATORY FFP LABOR CLIN

CLIN	Description	QTY	Unit	Total Firm Fixed Price
4001	Labor (Task 1)	1 (12)	*Lot* (month)	(b) (4)

MANDATORY CPFF TERM LABOR CLIN

CLIN	Description	Level of Effort/ # of Hours	Cost	Fixed Fee	Total CPFF
4002	Labor (Tasks 2-5)	(b) (4)	(b) (4)	(b) (4)	(b) (4)

COST REIMBURSEMENT TRAVEL and ANCILLARY PRODUCTS/SERVICES CLINs

CLIN	Description		Total NTE Price
4003	Long-Distance Travel Including Indirect Handling Rate (b) (4)	NTE	(b) (4)
4004	Ancillary Products/Services* Including Indirect Handling Rate	NTE	(b) (4)

CAF

CLIN	Description		Total Ceiling Price
4005	Contract Access Fee	NTE	(b) (4)

TOTAL CEILING FOURTH OPTION PERIOD CLINs: $14,020,990

GRAND TOTAL CEILING ALL CLINs: $58,695,697

B.5.6 INDIRECT/MATERIAL HANDLING RATE

Long-Distance Travel and Ancillary Products/Services costs incurred may be burdened with the contractor's indirect/material handling rate in accordance with the contractor's disclosed practices, provided that the basic contract does not prohibit the application of indirect rate(s) on these costs,

a. If no indirect/material handling rate is allowable in accordance with the contractor's disclosed practices, no indirect/material handling rate shall be applied to or reimbursed on these costs.

b. If no rate is specified in the schedule of prices above, no indirect rate shall be applied to or reimbursed on these costs.

The indirect handling rate over the term of the TO shall not exceed the rate specified in the schedule of prices above.

B.5.7 DIRECT LABOR RATES

Labor categories proposed shall be mapped to existing Alliant labor categories.

B.6 INCREMENTAL FUNDING

B.6.1 INCREMENTAL FUNDING LIMITATION OF GOVERNMENT'S OBLIGATION

Incremental funding in the amount of $10,853,279 for CLINs 0001 through 1005 is currently allotted and available for payment by the Government. Additional incremental funding for these CLINs may be allotted and available for payment by the Government as the funds become available. The estimated period of performance covered by the allotments for the mandatory CLINs is June 1, 2018 unless otherwise noted in Section B. The TO may be modified to add funds incrementally up to the maximum of $58,695,696 over the performance period of this TO. These allotments constitute the estimated cost for the purpose of Federal Acquisition Regulation (FAR) Clause 52.232-22, Limitation of Funds, which applies to this TO on a CLIN-by-CLIN basis.

When the work required under any CPFF CLIN is completed, and that work is within the total estimated cost shown above, the contractor shall be entitled to payment of fixed fee proportional to cost incurred for that CPFF CLIN. The contractor may present, with its monthly vouchers for costs, a fee voucher in an amount bearing the same percentage of fixed fee as the certification of incurred costs bears to the total estimated cost for each CPFF CLIN. However, in accordance with Federal Acquisition Regulation (FAR) 52.216-8, after payment of 85 percent of the fixed fee for the total TO, the Federal Systems Integration and Management Center (FEDSIM) Contracting Officer (CO) may withhold further payment of fixed fee until a reserve shall have been set aside in an amount which the FEDSIM CO considers necessary to protect the interest of the Government. This reserve shall not exceed 15 percent of the total fixed fee or $100,000, whichever is less.

C.1 BACKGROUND

The Office of Environmental Information (OEI) operates the Environmental Protection Agency's (EPA's or Agency's) Enterprise Hosting Division (EHD) in Research Triangle Park (RTP), North Carolina (NC). A significant component of the EHD is the Agency's HESC program.

C.1.1 PURPOSE

HESC's services include provisioning, maintaining, and supporting the use of the High Performance Computing (HPC) and scientific visualization hardware and software with technical support of projects involving scientific computing (Environmental Modeling and Visualization Laboratory (EMVL) project support). Currently, HPC Infrastructure Support services are used by EPA's Office of Research and Development (ORD) and Office of Air and Radiation/Office of Air Quality Planning Standards (OAR/OAQPS). Factors with the potential to drive growth in the demand for HPC Infrastructure Support and EMVL are discussed below.

HPC Infrastructure Support

a. **Expanded Role for Computational Science.** The Agency's research community is increasing demand for HPC computational support. For example, ORD's National Exposure Research Lab (NERL) and OAR/OAQPS use EHD's HPC resources to support a variety of increasingly complex air quality, atmospheric chemistry, climate change, and emissions models. At present, these air quality and climate change models form the bulk of the HPC workload.

   These model runs are increasing in scale (e.g., from regional, to continental United States (U.S.), to hemispheric, to global) and resolution (both spatial and temporal), expanding requirements for compute capacity, memory, and storage. EHD also expects increased HPC use for Computational Fluid Dynamics (CFD), molecular modeling, computational toxicology, computational chemistry, and virtual human organ modeling applications.

b. **Emerging Technologies**. As the demand for HPC and scientific data visualization increases, EPA plans to use advanced processor technologies such as Graphics Processor Units (GPUs) and other coprocessors. EPA already pilots GPUs for HPC and will continue to use such technologies on a production scale. The Agency also plans to use cloud computing in support of scientific computing.

   EPA is also assessing distributed processing, storage, analysis, and sharing of massive volumes of data under a data analytics/big data framework. EPA is using NoSQL databases in conjunction with data analytics to support some HESC projects. Compute and data grids are also under consideration.

c. **Collaboration.** Security concerns over the last ten years have placed significant restrictions on on-line collaboration. These restrictions have greatly reduced the ability of EPA staff to collaborate with outside organizations such as other Government departments/agencies, academia, and state/local partners. The implementation of the Special Security Zone (SSZ) for Science has mitigated the negative impact of these restrictions to some extent for EPA scientists. However, much work still remains to enable adequate collaboration for science and environmental research. This may include

high-speed networks such as Internet2 or the use of dedicated lines.

EMVL Project Support

a. **Continuing an Expanded Role for Computational Science.** The EPA research community's demand for EMVL services is increasing. For example, the creation of the National Center for Computational Toxicology (NCCT) has resulted in EMVL support for several NCCT projects. This has included the modeling and visualization of cellular processes, programming support for the Aggregated Computational Toxicology Resource (ACToR) system for searching toxicology databases, and developing tools to assist in building and testing models of a virtual embryo. Other projects include the ongoing development of the Remote Sensing Information Gateway (RSIG), a collaborative project with the National Aeronautics and Space Administration (NASA) and the National Oceanic and Atmospheric Administration (NOAA). RSIG has provided easy access to large data sets, creating a demand for complex data fusion tools and visualizations, some in 3-D, and novel means for obtaining and transforming environmental data.

b. **Integrated and Transdisciplinary Research.** As knowledge of the complexity of environmental and human health issues grows, EPA is addressing a variety of integrated problems. Implementing integrative approaches to complement the traditional single discipline approaches will make EPA better able to solve challenging problems. EMVL customers also emphasize trans-disciplinary research. In all aspects of EMVL's work, from problem identification and definition to research design and implementation, EMVL involves a wide span of disciplines to bring different perspectives to the table.

c. **Climate Change.** EPA is taking a more active role in climate change research. As such, more climate researchers will need EMVL support. Climate change research is currently supported on the HPC platform. EMVL support includes the analysis and visualization of HPC platform outputs, but could expand to include code optimization.

d. **Ecosystem Modeling.** EMVL supports development and fine-tuning of ecosystem models; these include modeling and visualization of Mississippi river basin nutrients and their impact on marine life in the northern Gulf of Mexico due to hypoxia. Another example is an application for modeling sustainability of coral reef ecosystems for land use decisions.

e. **Increased Use of Models and Simulations in Life Sciences.** The EMVL has been supporting EPA scientists for several years in developing and using a model (LUNG) of the human respiratory system to represent inhalation, deposition, and clearance of contaminants while making the model adaptable to age, race, sex, and health. LUNG uses CFD to model the transport of the contaminants. Another key project in this area is Virtual Embryo, which simulates a biological system undergoing morphogenesis and exposure to environmental chemicals and to predict adverse responses.

f. **Data Access, Visualization, and GeoPlatform.** EMVL supports many projects that access data from various dispersed sources and visualization of that data. Foremost among these is RSIG, a web-based tool that enables researchers to access a variety of distributed atmospheric environmental datasets (satellite, model, aircraft, and surface-

based), view the combined data and download only the needed subset. A newer 3-D executable version of RSIG is now available.

Another key activity is the Estuary Data Mapper (EDM). EDM is an interactive graphical application that enables scientists to view and select maps of watersheds and estuaries; specify, view, and download data such as tidal measurements, discharge measurements, and water and sediment quality measurements; and export the data to other relevant databases as needed. EMVL expects increasing demand from EPA scientists for data access and visualization support, including the development of web services and dashboards.

Additionally, EPA uses an Agency-wide GeoPlatform to encourage data and code sharing. EMVL general use applications that contain geospatial information must be registered in the GeoPlatform. Note, general support for geospatial activities in the Agency is provided under another TO. The HESC/EMVL contractor shall coordinate with staff on that TO.

g. **Data Analytics.** The contractor shall coordinate work on scientific applications using data analytics and big data with the staff of EPA's Chief Data Scientist.

h. **Inter-Agency Collaboration.** The contractor shall support increased collaboration with other Federal research agencies and requests for EMVL assistance developing and supporting tools, such as web interfaces and services to databases to facilitate collaboration and mashups.

i. **Availability of modeling and visualization services through TZ[1] service.** EMVL project support services are available to ORD and non-ORD customers through the TZ service of EPA's WCF. The total EMVL project support workload for any Fiscal Year (FY) depends on the volume of TZ orders received for that year.

OEI will continue providing HESC services to support EPA's evolving research programs. OEI will provide HPC infrastructure and EMVL support for research and development programs requiring collaboration at the state, national, and international levels.

Most importantly, current EPA HESC projects address many of EPA's Strategic Plan goals. These include:

a. Goal 1: Addressing climate change and improving air quality.
b. Goal 2: Protecting America's waters.
c. Goal 3: Cleaning up communities and advancing sustainable development.
d. Goal 4: Ensuring the safety of chemicals and preventing pollution.
e. Goal 5: Protecting human health and the environment by enforcing laws and assuring compliance.

C.1.2 AGENCY MISSION

EPA's mission is to protect human health and the environment. Since 1970, EPA has worked for a cleaner, healthier environment for the American people. EPA employs over 15,000 people

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1 Not an acronym. "TZ"'s are services that are provided to EPA organizations under its Working Capital Fund (WCF).

across the country, including offices in Washington, D.C., 10 regional offices, and more than a dozen laboratories and other locations. EPA staff come from a variety of disciplines; more than half are engineers, scientists, and policy analysts. In addition, many employees are legal, public affairs, financial, information management, and computer specialists. EPA is led by its Administrator, who is appointed by the President of the U.S.

OEI is the central IT organization within EPA. The Assistant Administrator for OEI serves as the Agency's Chief Information Officer (CIO). OEI, under the supervision of the CIO, is responsible for advancing the creation, management, and use of IT and data as a strategic resource to enhance public health and environmental protection, promote informed decision-making, and improve the public's access to information about environmental conditions. Additionally, OEI is responsible for providing access, use, and communication of environmental program and administrative information.

The Office of Information Technology Operations (OITO) within OEI is the EPA's focal point for management and implementation of EPA's IT infrastructure.

C.2   SCOPE

The scope of this TO includes HPC and EMVL, as follows.

C.2.1   HPC

HPC refers to computing performed on large systems that use very fast and specially arrayed processors, high-speed networks, large-capacity storage systems, and large-scale memory subsystems. EHD's HPC also includes pre- and post-processing systems and visualization equipment used in conjunction with the HPC platform(s). EHD provides the HPC to support environmental research of global proportions and improved science products used to develop regulations and support litigation responses.

HPC demand will grow rapidly over the next few years. Key drivers for this anticipated growth include increasing focus on climate change, growing reliance on computer models to analyze the dispersion of pollutants and toxins through natural and man-made disasters, and the accelerating shift to computer models in toxicology. With the vast data generated on the HPC platform, demand for sophisticated visualization technologies is also increasing. Currently, many EPA HESC projects include both HPC and visualization components.

C.2.2   SCOPE OF HPC REQUIREMENTS

The scope of the HPC portion in this TO includes the administration, maintenance, and monitoring of existing EHD HPC infrastructure assets. It also includes acquisition planning, installation, administration, maintenance, support, decommissioning, removal, and monitoring of upgrades, replacements, and additions to existing infrastructure assets.

The scope includes, but is not limited to, the following:

a.   Supporting customers in their use of the hardware, software, and telecommunication resources within the EHD HESC environment.

b.   Implementing, operating, and maintaining pre- and post-processing systems.

c. Training in the use of HPC systems.

d. Project and engineering assistance with customer-specific HESC resources.

e. Recommending the use of new technologies to improve performance, add capacity, cut costs, or expand collaboration.

f. Implementing, optimizing, integrating, and operating new technologies and solutions to meet new or increased demands.

g. Supporting and maintaining collaboration or implementing resource sharing services.

h. Supporting multiple operating system (OS) instances on a single host machine, where appropriate.

i. Identifying, researching, benchmarking, and evaluating new technologies.

j. Ensuring compliance with security requirements (e.g., Federal Information Security Management Act (FISMA), National Institute of Standards and Technology (NIST), Agency/OEI Policies and Directives) including preparation of Security Plans and use of tools, processes, and reporting mechanisms for ongoing monitoring, assessments, audits, and vulnerability remediation of the systems.

k. Documenting all configurations and work instructions for operating the systems managed under this contract.

l. Conducting market research of HESC technologies.

m. Enabling customer and partner access to data both within and outside the EPA.

n. Capacity planning across all compute and storage platforms and network fabrics.

o. Supporting the development of plans to allocate HPC resources and executing these plans.

p. HPC visualization and collaboration resource management.

q. Managing customer access to HPC and visualization compute and data resources.

r. Creating and updating documents related to the HESC support provided (both HPC and EMVL).

s. Providing content for both intranet and internet websites regarding EHD's HPC and EMVL work and through other resources such as SharePoint.

t. Assisting computational project planning and implementation (e.g., consolidation of dispersed HPC resources).

u. Supporting scientific applications on public and/or private cloud computing services or external HPC resources as needed.

v. Supporting special projects.

w. Decommissioning and removal of equipment.

C.2.3 EMVL PROJECT SUPPORT SCOPE

The EMVL Project Support scope includes provision to EPA scientists and their collaborators of specialized computing services (contract staff and tools) that use advanced IT to analyze complex, multi-dimensional sets of numerical data and recreate and/or predict events that happen in nature, or for similar purposes.

These services improve the ability to understand environmental phenomena and predict changes in those phenomena. This predictive capability can be measured against actual data and fine-tuned to provide decision makers with valuable information that influences the direction of research, policies, and regulations.

EMVL Project Support combines scientific, IT, and project management expertise to leverage existing Agency IT infrastructure, policies, procedures, and sources of data. Services currently performed by EMVL Project Support include, but are not limited to:

a. Modeling a system, a region, a process: Human systems modeling (e.g., human lung), regional ecosystem modeling (e.g., Coastal General Ecosystem Model for modeling the effects of hypoxia in the Gulf of Mexico and other bodies of water), developmental biology (e.g., Virtual Embryo), and atmospheric modeling (e.g., Community Multiscale Atmospheric Quality (CMAQ)).

b. Visualization Development: Scientific visualization represents numerical data in a visual format, enabling environmental scientists and analysts to better understand the results of their research and to effectively convey those results to others. EMVL Project Support develops custom visualization applications using COTS and Open Source visualization tools. Examples include programming support for the Visualization Environment for Rich Data Interpretation (VERDI) and the development of custom applications such as EDM for ORD's Narragansett Lab.

c. Analysis: EMVL Project support includes analytical services, such as troubleshooting, recommending hardware and software options, problem diagnosis and resolution, and technical guidance.

d. Custom Module Development and Code Optimization: EMVL project support includes developing custom modules, drivers, data translators/filters, database solutions, web services, and other software tools; the re-hosting or optimization of software to new platforms (e.g., from a vector to a massively parallel environment, or from a conventional computing environment to GPUs and coprocessors); and advising EPA clients on custom modules, routines, networks, and programs. EMVL Project Support also includes development efforts spanning from the micron level (e.g., predicting intermolecular interactions with various chemicals) to the global scale, enabling, for instance, the use of satellite data to evaluate regional air quality models.

e. Articles and Graphics for Publications: Project support includes assisting EMVL customers with scientific papers published in peer-reviewed journals regarding work that incorporates scientific computing activities in which EMVL was involved. EMVL reviews, provides illustrations, and describes IT methods.

f. Hands-On Demonstrations: EMVL project support uses large-format displays to demonstrate visualization products to small groups in its visualization laboratory and through web-based collaboration tools and videos to remote audiences. The purpose of these demonstrations varies from highly technical analyses of modeling results to high-level presentations for decision makers. EMVL frequently provides hands-on demonstrations to EPA scientists, managers, and guests of the EPA.

Section J, Attachment N, summarizes EMVL projects that will be supported in FY 2017. This listing includes information on the hardware and software used by each of the projects and the staff hours allocated.

C.2.4 SCOPE OF REQUIREMENTS, EMVL PROJECT SUPPORT

The scope of requirements includes, but is not limited to, the following:

a. EMVL model software services:

1. Code optimization.
2. Code porting.
3. Algorithm design and optimization.
4. Parallelization of code.
5. Project support and engineering assistance with customer-specific HESC solutions.
6. Assistance in EMVL computational project planning, requirements analysis, and implementation.

b. Modeling, visualization, and computational science support services, such as:

1. Visualization of customer-supplied or project-generated data.
2. Research and evaluation, at customer's request, of data sources and visualization tools.
3. Development of self-contained multimedia products for distribution in multiple formats (e.g., streaming video, other media formats).
4. Code development for data conversions and modifications to open source visualization tools.
5. CFD model development and analyses.
6. Developing approaches for management of scientific data, including database design, data acquisition, provisioning, and storage.
7. Developing and testing scientific applications and models.
8. Evaluation and recommendation of hardware and software technology and tools to expand and modernize the EMVL's visualization infrastructure and capabilities.
9. Enabling access to scientific data from disparate sources, integrating them, and providing user-friendly access to the underlying information through mechanisms such as web services and dashboards.
10. Developing applications and techniques for delivery and visualization of remotely sensed scientific data.
11. Moving successful scientific applications into a production environment, including coordinating with EPA's application development, hosting, and public access support teams.

For the most part, this Contract does not support Geographic Information Systems (GIS). It is not intended to provide support for the ongoing operation, maintenance, and management of the Agencies' GIS infrastructure. However, any specific projects in this TO that require processing and display of geospatial components are within scope and shall be supported. EMVL staff have

traditionally coordinated their visualization work with GIS specialists on other contracts, when necessary, to provide customers with a single point of contact (POC) for visualization products requiring geospatial components. The contractor shall continue this practice through the period of performance of this TO. All applications developed by EMVL using geospatial data and made available to EPA or external partners shall be registered in EPA's GeoPlatform.

C.3   CURRENT INFORMATION TECHNOLOGY (IT)/NETWORK ENVIRONMENT

The current EHD HPC platform is an IBM iDataPlex cluster with a total of 192 compute nodes (1,792 central processing units (CPUs)). 32 of these are IBM 3650 Sandy Bridge nodes with Intel E5-2670 2.6 Gigahertz (GHz) processors while the remaining 160 have a mix of IBM 3650 M3 and IBM DX360 M2 nodes with Nehalem Intel 5500 2.6 GHz processors. The cluster also includes two IBM DX360 nodes for single-core jobs, four M3 and M4 nodes for login/interactive work, four M2 and M3 nodes for transfers from the HPC to a tape-based Archival Storage Management (ASM) System, and four M3 and two M4 storage nodes for supporting IBM's General Parallel File System (GPFS). A procurement is in progress to replace the current cluster (Section J, Attachment Z). The cluster uses a two tier GPFS architecture composed of a Solid State Disk (SSD) Tier 1 with a usable capacity of 58 Terabytes (TB) and a spinning-disk IBM DS5300 Tier 2 with 685 TB usable. By the end of CY2016, the DS5300 will be replaced with a RAID Inc. ARI-109 Disk Array with 1.3 PB usable capacity. Memory per core varies based on node; M4 nodes all have 8 Gigabytes (GB)/core, while the M2 and M3 nodes have either 4 or 6 GB/core.

The HPC environment at the EHD also includes a Dell R720, a Dell R610, and a Dell R710 with 20 TB, 40 TB, and 4 TB of direct-attached disk, respectively; these systems are used for pre- and post-processing of HPC data. These systems and other computers in the HESC environment are linked to one another and to the Agency intranet via high-speed data communication network fabrics (40 Gigabits (Gb)/second(s) and 60 Gb/s InfiniBand and 10Gb/s Ethernet) using Transmission Control Protocol/Internet Protocol (TCP/IP) and other protocols, and these networked resources and the telecommunication links between them are an integral part of the HPC infrastructure.

Long-term data storage is provided by an ASM system connected to the HPC and ancillary systems. The ASM has an Oracle-Sun SL8500 automated tape library, 120 TB of disk cache in an Oracle-Sun ZFS appliance, and 33 Oracle-Sun T10000B and T10000C tape drives. The ASM is served by Oracle-Sun T5-2 servers, two primary and one that is used for back-up and testing. The SL8500 tape library currently stores 14 Petabytes (PB) of data composed of over 39 million files. Data retention is managed with an internally-developed tool using project information templates.

Also included as a part of the HPC Infrastructure are compute systems, workstations, and special equipment for scientific data visualization. Visualizations are graphic representations of large, complex datasets. Researchers use visualizations to examine output generated by numerically intensive models running on supercomputers. Visualizations help researchers gain insights into the trends, patterns, dependencies, and discrepancies in their data. Visualizations also help scientists evaluate actual environmental data and compare actual data with modeled data. At present, the hardware used for visualization consists of Apple Mac and Dell servers/workstations and large-format display systems. Some visualization applications also run on the HPC platforms described above.

Section J, Attachment O summarizes currently-supported systems in the HPC environment. Section J, Attachment P, provides a schematic of how the major HPC components are inter-connected. Section J, Attachment Q, provides information on the projects that were supported on the HPC platform and allocations by project. Section J, Attachment R lists most of the key software used on the HPC.

Section J, Attachment U provides FY 2017 HPC Project Statistics. Section J, Attachment V provides FY17 Archival Storage Statistics. Section J, Attachment W depicts HPC and Tape Archive Use by Month. Section J, Attachment X shows an example of an HPC Project Proposal and Section J, Attachment Y shows an example of an EMVL Project Proposal. Section J, Attachment Z is an example of a Request For Proposals (RFP) for a New HPC System.

C.4 OBJECTIVES

The objectives of this TO are to provide EHD's HESC services to EPA researchers and their collaborators. These HESC services encompass two areas: HPC and EMVL Project Support.

Related objectives:

   a. Provide HPC platforms, including mass storage, networks, system and application software, and support services that support and enhance the work of EPA's scientist community.
   b. Acquire new HPC systems, subsystems, and upgrades that provide the best value to the EPA. This may include compute and storage resources at remote locations.
   c. Operate and administer existing and newly acquired systems.
   d. Maintain and enhance system functionality and technical support services to the user community.
   e. Provide modeling, application enhancement, and visualization support to EPA science projects.

C.5 TASKS

The contractor shall fulfill all requirements as described in the following Task Areas:

   5.1 Program Management
   5.2 HPC Core
   5.3 HPC Special Projects
   5.4 Centrally-Funded EMVL Projects

5.5   Ad Hoc EMVL Projects

C.5.1   TASK 1 – PROVIDE PROGRAM MANAGEMENT

The contractor shall provide TO management support under this TO. This includes the management and oversight of all activities performed by contractor personnel, including subcontractors, to satisfy the requirements identified in this Statement of Work (SOW). The contractor shall identify a Program Manager (PM) by name, who shall provide management, direction, administration, quality assurance, and leadership in the execution of this TO.

C.5.1.1   SUBTASK 1.1 – COORDINATE A PROJECT KICK-OFF MEETING

The contractor shall schedule, coordinate, and host a Project Kick-Off Meeting (**Section F, Deliverables #1 and #2**) no later than ten workdays after Project Start (PS) at the location approved by the Government. The meeting shall provide an introduction between contractor and Government personnel involved with the TO. The meeting shall provide the opportunity to discuss technical, management, security issues, travel authorization, and reporting procedures. At a minimum, the attendees shall include Key contractor Personnel, representatives from the EPA directorates, other relevant Government personnel, and the FEDSIM Contracting Officer's Representative (COR). The contractor will provide the deliverables listed in the following at the Kick-Off Meeting. The Kick-Off Meeting shall address the following topics:

a. Points of contact (POCs) for all parties
b. Personnel discussion (i.e., roles and responsibilities and lines of communication between contractor and Government)
c. Staffing Plan and status
d. Transition-In Plan (**Section F, Deliverable #8**)
e. Prioritization of contractor activities
f. Draft Project Management Plan (PMP) (**Section F, Deliverable #10**)
g. Final Baseline Quality Control Plan (QCP) (**Section F, Deliverable #11**)
h. Security discussion and requirements (i.e., building access, badges, Common Access Cards (CACs))
i. Invoicing considerations
j. Revised Organizational Conflict of Interest (OCI) Management Plan (**Section F, Deliverable #12**)

The Government will provide the contractor with the number of Government participants for the Kick-Off Meeting and the contractor shall provide sufficient copies of the presentation for all present.

C.5.1.2   SUBTASK 1.2 – PREPARE A MONTHLY STATUS REPORT (MSR)

The contractor PM shall develop and provide an MSR (**Section F, Deliverable #3**). The MSR shall include the following:

a. Activities during the reporting period, by task (include: on-going activities, new activities, activities completed; progress to date on all above-mentioned activities). Start each section with a brief description of the task.

b. Summary of trips taken (attach trip reports to the MSR for the reporting period).

c. Items purchased on behalf of the Government during the month.

d. Accumulated invoiced cost for each CLIN up to the previous month.

e. Projected cost of each CLIN for the current month.

f. Monthly Performance against the Service Level Agreements (SLAs).

Ongoing tasks with no significant changes, significant accomplishments, or significant problems from the previous to the present period need not be reported. As directed by the Government, the contractor shall break out selected information, e.g., staffing information, from the main body of the MSR into specialized reports, e.g., project staffing reports.

C.5.1.3   SUBTASK 1.3 – CONVENE TECHNICAL STATUS MEETINGS

The contractor's PM shall convene a Technical Status Meeting, as needed, with the TPOC, COR, and other vital Government stakeholders. The purpose of these meetings is to ensure all stakeholders are informed of ongoing activities, opportunities are provided to identify other activities and establish priorities, and to coordinate resolution of identified problems or opportunities. The contractor shall provide Technical Status Meeting Agendas prior to the start of the meeting **(Section F, Deliverable #4)**, including issues to be discussed, decisions to be made, and action items to be assigned (to the extent they are known prior to the meeting), to the TPOC and FEDSIM COR.

The contractor's PM shall provide Technical Status Meeting Minutes (**Section F, Deliverable #4**), including attendance, issues discussed, decisions made, and action items assigned, to the TPOC and FEDSIM COR.

The following meetings do not require Technical Status Meeting Minutes. For these meetings, the Agendas are sufficient:

- EMVL Status Meetings

C.5.1.4   SUBTASK 1.4 – PREPARE A PROJECT MANAGEMENT PLAN (PMP)

The contractor shall document all support requirements in a PMP (**Section F, Deliverable #10**). The contractor shall provide the Government with a draft PMP on which the Government will make comments. The final PMP shall incorporate the Government's comments.

The PMP shall:

a. Describe the proposed management approach.

b. Contain detailed Standard Operating Procedures (SOPs) for all tasks. (Note, SOPs here in the PMP are for Project Management; SOPs (**Section F, Deliverable #17**) are for HPC system operations and management and are not part of the PMP.)

c. Include milestones, tasks, and subtasks required in this TO.

    d.   Provide for an overall Work Breakdown Structure (WBS) and associated responsibilities and partnerships between Government organizations.

    e.   Include the contractor's QCP (**Section F, Deliverable #11**).

C.5.1.4.1   SUBTASK 1.4.1 – UPDATE THE PROJECT MANAGEMENT PLAN (PMP)

The PMP is an evolutionary document that the contractor shall update annually at a minimum (**Section F, Deliverable #10**). The contractor shall work from the latest Government-approved version of the PMP.

C.5.1.5   SUBTASK 1.5 – BUDGET BRIEFINGS

The contractor shall account for all costs of this task under WCF cost centers identified by the COR. The contractor shall provide Budget Briefings (**Section F, Deliverable #5**). The contractor shall format this briefing according to the Government's instructions. The Budget Briefings shall include, at a minimum:

    a.   A list of the EPA service areas by numerical subtask.

    b.   A spreadsheet with the resources (actual and estimated) for each service area by past and current FY.

    c.   A spreadsheet detailing funding (actual and estimated) for each CLIN with separate columns for average monthly burn rates.

The contractor shall adhere to all applicable EPA, OEI, OITO, EHD, and Agency WCF policies, procedures, directives, and standards. Access to this documentation will be provided by the Government, as will access to EPA IT resources.

The contractor shall:

    a.   Provide monthly TZ billing reports to assist in tracking hourly consumption with all active TZ open WCF registrations.

    b.   Provide, upon request, a more detailed analysis of all costs related to an individual, project, deployment, or application support.

C.5.1.6   SUBTASK 1.6 – PREPARE TRIP REPORTS

The Government will identify the need for a Trip Report (**Section F, Deliverable #6**) when the request for travel is submitted. The contractor shall provide a summary of all long-distance travel including, but not limited to, the name of the employee, location of travel, duration of trip, and POC at travel location. Trip reports shall also contain Government approval authority, total cost of the trip, a detailed description of the purpose of the trip, and any knowledge gained.

C.5.1.7   SUBTASK 1.7 – UPDATE BASELINE QUALITY CONTROL PLAN (QCP)

The contractor shall update the QCP (**Section F, Deliverable #11**) submitted with the proposal and provide a final baseline QCP as required in Section F. The contractor shall periodically update the QCP as changes in program processes are identified.

Within the QCP, the contractor shall identify its approach for providing quality control in meeting the requirements of the TO. The contractor's QCP shall describe its quality control

methodology for accomplishing TO performance expectations and objectives. The contractor shall fully discuss its validated processes and procedures that provide high quality performance for each Task Area. The QCP shall describe how the processes integrate with the Government's requirements.

C.5.1.8 SUBTASK 1.8 - TRANSITION-IN

The contractor shall provide a Transition-In Plan (**Section F, Deliverable #8)** at the Kick-Off Meeting and no later than (NLT) ten work days after PS. During the transition-in, the contractor shall ensure that there will be minimum service disruption to vital Government business and no service degradation during and after transition.

The contractor shall provide an Updated Transition-In Plan (**Section F, Deliverable #8**) based on the contractor's proposed plan and the Government's comments.

The contractor shall ensure that there will be minimum service disruption to vital Government business and no service degradation during and after transition. All transition activities shall be completed 85 days after approval of final Transition Plan.

C.5.1.9 SUBTASK 1.9 - TRANSITION-OUT

The contractor shall provide Transition-Out support when required by the Government. The Transition-Out Plan shall facilitate the accomplishment of a seamless transition from the contractor to an incoming contractor and/or Government personnel at the expiration of this TO. The contractor shall provide a Transition-Out Plan (**Section F, Deliverable #9**). In the Transition-Out Plan, the contractor shall identify how it will coordinate with the incoming contractor and/or Government personnel to transfer knowledge regarding the following:

a. Project management processes.
b. Points of contact.
c. Location of technical and project management documentation.
d. Status of ongoing technical initiatives.
e. Appropriate contractor-to-contractor coordination to ensure a seamless transition.
f. Transition of Key Personnel.
g. Schedules and milestones.
h. Actions required of the Government.

The contractor shall also establish and maintain effective communication with the incoming contractor/Government personnel for the period of the transition via weekly status meetings or as often as necessary to ensure a seamless transition-out. The contractor shall execute transition-out activities IAW the Government-approved Transition-Out Plan, NLT 90 calendar days prior to expiration of the TO.

C.5.2   TASK 2 – HPC CORE

Section J, Attachments O through R, describe the best available information about the current state of HPC systems to be supported under this TO. The Government will provide updated documentation of then-current HPC systems at the Kick-Off Meeting.

    a.   Attachment O, Currently Supported HPC Systems
    b.   Attachment P, Major HPC Components and Interconnects
    c.   Attachment Q, FY 2017 Allocations (CPU-Hours)
    d.   Attachment R, Software Used On EPA's HPC Platform

C.5.2.1   (RESERVED)

C.5.2.2   (RESERVED)

C.5.2.3   SUBTASK 2.3 - INFRASTRUCTURE SERVICES AND GENERAL CUSTOMER SUPPORT

C.5.2.3.1   SUBTASK 2.3.1 - HPC AND SCIENTIFIC SYSTEMS ONGOING SUPPORT

The contractor shall support EPA users of HESC systems and software to effectively meet their scientific requirements. This includes keeping all components of the EMVL General Support System (GSS) (Section J, Attachment P), operational at all times, except for periods of maintenance agreed to by the Government.

Activities under this task include, but are not limited to:

    a.   Customer support
    b.   Systems administration
    c.   Overseeing vendor maintenance agreements

The contractor shall also maintain all software, compiled code, and application libraries and update them as new releases are approved **(Section F, Deliverable #20)**. The contractor shall provide older versions of these applications, codes, and libraries to EPA users who require them for consistency or interoperability with other software.

The contractor shall provide systems administration that includes, but is not limited to, installing, configuring, integrating, testing, documenting (producing configuration documents by component and work instructions for operation of each system and subsystem **(Section F, Deliverable #21)**), and operating all HESC systems. Systems administration also includes coordination and support of Agency requirements for continuous monitoring and assessment.

EPA will provide hardware and software maintenance agreements for IT acquired prior to TO award until these agreements expire, but the contractor shall oversee their execution in terms of actual maintenance calls and oversight. The contractor shall renew expiring maintenance agreements for pre-existing hardware and software and shall acquire agreements for hardware and software that the contractor procures **(Section F, Deliverable #22)**. The contractor shall transfer any maintenance agreements current at the time of TO expiration to the party that the Government identifies (H.11.5). All agreements shall conform to the provisions in Section H.11.

The contractor shall identify any maintenance issues, coordinate with maintenance vendors, oversee replacement of faulty parts, verify/validate that maintenance issues have been resolved, and, when appropriate, develop a root cause analysis as to why a critical problem occurred and what can be done to reduce the risk of recurrence **(Section F, Deliverable #23)**. The contractor shall cooperate fully with the EPA Service Desk support contractor with tracking and resolving all trouble tickets with potential or actual involvement of HPC resources. The contractor shall cooperate fully with the EPA, other support contractors, and other stakeholders with the resolution of problems that cross contractual, organizational, network, other technical or other boundaries. The contractor shall respond to and resolve Service Desk tickets for HPC resources and conform to Service Desk SLAs.

The contractor shall record and track all maintenance issues in the Office of Information Technology Operation's (OITO's) problem management and change management systems. The contractor shall notify customers of all HPC-related issues that may impact them, when systems will be down for maintenance, and when they are expected to be back in service. After maintenance outages are completed and systems returned to operational state, the contractor shall notify customers.

Additionally, such notifications shall include any changes needed to support the Agency's remote access platforms, procedures, and standards. The contractor shall be available to provide support when a critical system component fails and the contractor is notified via the EHD monitoring processes. When notified of an issue, the contractor shall attempt to resolve the issue promptly by site visit or remotely, as appropriate, using Agency-approved remote access methods for systems administration. Once identified, the contractor shall address issues that are not critical to continuity of service by the next business day (reference the Quality Assurance Surveillance Plan (QASP), Section J, Attachment GG).

The contractor shall assist customers with porting or optimizing codes for use on the HPC and various pre- and post-processing systems in the EMVL GSS. The contractor shall also provide impromptu support to organizations/users in need of assistance using scientific computing resources. The contractor shall document support provided under this sub-task **(Section F, Deliverable #24)**.

C.5.2.4 SUBTASK 2.4 - SECURITY SUPPORT

Security is a crucial element in systems administration and operation. The contractor shall ensure that all OS and applications patches required by the Agency are applied promptly to all appropriate systems supported by this TO. The contractor shall monitor all relevant vendor security bulletins as well as bulletins issued by the Computer Emergency Response Team (CERT).

The contractor shall support security functions for the EHD HESC security environment, which is referred to for Security purposes as the EMVL GSS. These include, but are not limited to, Risk Assessments, Audits, Technical Vulnerability Assessments, remediation of vulnerabilities identified, creation and update of Security Plans, System Categorization, and Assessment and Continuous Monitoring of Applicable Security Controls using EPA's automated system security evaluation and remediation tracking software (currently XACTA). The contractor shall support

achievement and preservation of GSS's Authority To Operate (ATO). The contractor shall report its security enhancements and activities (**Section F, Deliverable #25**).

C.5.2.5 SUBTASK 2.5 - HPC SYSTEMS MONITORING

The EPA currently contracts for HPC operations monitoring using another contractor and the InfraView ScienceLogic EM7 tools. These assets currently include all production systems such as the HPC, the ASM servers, the ASM tape library, and pre-and-post-processing servers. The EPA's day-to-day support provided by the other contract includes monitoring operational consoles and notifying the Alliant HPC contractor system support personnel of equipment outages and/or restarts 24x7. Note, maintenance of HESC systems is listed under Section C.5.2.3.1; see also C.5.2.6.

The contractor shall coordinate with the other EHD contract support personnel to properly monitor HESC assets and their future upgrades and replacements. The contractor shall also ensure that recovery from system failures and required upgrades are implemented quickly and efficiently, with the minimum possible disruption to users.

The contractor shall provide users of the main HPC systems with online access to system availability and usage monitoring information to include nodes available, nodes down, nodes/cores idle, jobs running, job status, and jobs queued (**Section F, Deliverable #27**).

Additionally, the contractor shall support data-center-wide monitoring and reporting of the status of EHD systems and devices, using tools that include InfraView ScienceLogic EM7. The contractor shall record, track, and report outages using EHD-provided tools (e.g., REMEDY, STAR).

C.5.2.6 SUBTASK 2.6 - VISUALIZATION SYSTEMS MONITORING AND MAINTENANCE

The contractor shall (1) support and maintain all the commercial visualization hardware and software systems used at the EMVL, (2) maintain open source software currently used by EMVL projects, and (3) maintain the daily operation of the Visualization Laboratory (**Section F, Deliverable #28**). The Visualization Laboratory contains a projector and screen, connected to machines in the room, as well as to high performance systems located elsewhere in the NCC building. Software includes 3-D animation of models, CFD, layering datasets to visualize multiple variables at a time, and Maya and Fluent (Section J, Attachment R).

The contractor shall quickly and efficiently remedy system failures and implement required upgrades with the minimum possible disruption to users.

C.5.2.7 SUBTASK 2.7 - OPERATIONS LOGS AND UTILIZATION REPORTS

The contractor shall maintain a continuous record of computer operations in an Operations Log (**Section F, Deliverable #29**) for all major HESC systems. A copy of the operations log in electronic format shall be made available to the Government on written request.

Automated morning report(s) that summarize HPC operations for the previous day shall be delivered to EPA HESC staff prior to the start of each day via electronic mail (email) (**Section F, Deliverable #30**).

The contractor shall summarize major trends in monthly HPC use (**Section F, Deliverable #31**). The contractor shall deliver a file of cumulative monthly systems use statistics within 24 hours of the end of each month. The file shall be consistent with file formats needed to import into off-the-shelf, personal computer (PC)-oriented spreadsheet and graphics packages. Additionally, the contractor shall incorporate the information contained in the file into specially designed reports on request (**Section F, Deliverable #32**). The contractor shall store this information in a database and automate requested reports.

C.5.2.8   SUBTASK 2.8 - CAPACITY PLANNING

The contractor shall assess the capacity needs of systems supported by this TO and recommend upgrades or replacements of existing systems.

The contractor shall prepare a capacity plan each FY that describes the anticipated computer hardware and software needs of the HESC environment for the coming FY (**Section F, Deliverable #33**). The plan shall list, in priority order, all the recommended and anticipated additions.

C.5.2.9   SUBTASK 2.9 - HPC ACQUISITION

At the COR's direction, the contractor shall (1) prepare and deliver an acquisition sourcing package (**Section F, Deliverable #34)** and (2) acquire systems consistent with the acquisition sourcing package. Sourcing HPC under this TO is not limited to direct purchase. All of the following are possible:

a. Direct purchase
b. Performance at EHD site, another EPA site, or a non-Government site
c. Loaned or trial systems[2]
d. Dedicated or shared facilities
e. Cloud computing
f. Grid computing or collaborative shared system configurations
g. Other distributed processing
h. Multiple sources
i. Acquisitions of hardware, software, maintenance, and media (e.g., tapes) from the Open Market; General Services Administration (GSA) Schedules; Solutions for Enterprise-Wide Procurement (SEWP); and other sources

Note, these alternatives do *not* include leasing.

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2. HPC system manufacturers experimenting with new system designs that have not been proven as commercial or custom products may offer prototypes or pilot systems for Alpha or Beta testing. The contractor shall cooperate with EPA initiatives to test such systems.

In each case, the contractor shall support the Government's assessment of the type of solution that best fits current and expected future circumstances, including budget, finance, technology, IT market, user requirements, Enterprise Architecture, compatibility, risk, security, performance, functionality, policy, regulation, and other relevant factors.

The contractor shall competitively acquire HPC hardware, system software, and support services using its approved purchasing system(s). The contractor shall integrate and maintain these HPC systems, along with any existing systems that are retained and provided to the contractor as Government-Furnished Maintenance/Government-Furnished Equipment (GFM/GFE). (Maintenance includes both hardware and software.)

Periodically, the contractor shall acquire new or upgraded HPC hardware, system and applications software, and support services. There is no fixed interval for periodic upgrades; the schedule depends on user requirements, resource availability, and technical, architectural, and management considerations that are not fixed in advance (Section J, Attachment P).

In accordance with a Government-approved System Architecture document, the contractor shall acquire HPC systems and related services on behalf of EHD. The contractor shall not acquire any HPC hardware or alternative HPC sources that are not consistent with the Government-approved System Architecture. HPC systems include, at a minimum, the following:

a. Processors
b. Memory
c. Controllers
d. Mass Storage Subsystems
e. Storage Area Networks
f. Storage Interconnect Devices
g. Disks
h. Tape Devices
i. Storage Servers
j. Robotic Devices
k. High Performance Inter-machine Communications and Network Equipment (Local Area Network (LAN) and Wide Area Network (WAN)) and Infrastructure.
l. Firewalls
m. Cables, cabinets, power supplies and other miscellaneous equipment
n. Consoles
o. Printers
p. System software
q. Third-party software packages
r. Warranties and maintenance on hardware and software
s. May include multiple systems, homogeneous and heterogeneous systems, and systems from several vendors
t. High-end display systems integrated into HESC environments
u. Off-site disaster recovery tape storage services

HPC system acquisition includes alternative sources where appropriate.

The contractor shall prepare and deliver an acquisition sourcing package (**Section F, Deliverable #34**) and perform acquisition tasks that conform to its approved purchasing system and include the following:

   a. Analysis of alternatives.
   b. Develop HPC system solicitations and supporting documents, including source selection plans.
   c. Design, build, and administer performance validation packages.
   d. Solicit proposals from offerors.
   e. Evaluate proposals and negotiate.
   f. Document results of the evaluation and negotiation of received proposals.
   g. Award hardware subcontract(s) and/or alternative source subcontracts.
   h. Plan physical plant and facilities of HPC hardware

   Notes:
   1. Facility modifications (e.g., walls, floors, ceilings, fire suppression equipment, water supplies, electrical conduit, and fire, smoke, and water detectors) are not the contractor's responsibility.
   2. The EHD data center is protected by security procedures, access controls, smoke detectors, sprinklers, environmental monitoring devices and by other means.

This acquisition includes the acquisition of system software, maintenance, technical support and related support services, either with the hardware or as standalone acquisitions.

The contractor shall provide appropriately detailed and persuasive analyses in support of acquisitions, particularly alternative source acquisitions. The contractor shall disclose the life-cycle costs and benefits of system sources.

The contractor shall ensure that HPC acquisitions conform to the OCI Management Plan and that the acquisition does not create an actual, potential, or perceived OCI. If the contractor proposes to meet a requirement using internal resources or by selling its own products to the Government (e.g., the contractor's own cloud facilities, hardware products, or software tools), then that selection shall be persuasively and transparently justified to the Government.

Acquisition support also includes assessment of energy consumption, quality requirements, and cooling requirements and the other life-cycle costs of the hardware being evaluated.

Purchases over the micropurchase threshold require a FEDSIM COR approved Request to Initiate Purchase (RIP). For purchases under the micropurchase level, the contractor shall coordinate via email with the FEDSIM COR.

C.5.2.10 SUBTASK 2.10 - INSTALLATION OF NEW EQUIPMENT AND SOFTWARE AND DECOMMISSIONING OF EQUIPMENT

The contractor shall implement all upgrades and phase-outs of HESC systems hardware and software. This includes upgrading systems that have reached end of life, incremental upgrades,

and upgrades to add functionality. It also includes the installation and de-installation of hardware and software **(Section F, Deliverable #35)**.

Major examples of contractor support activities under this TO include, but are not limited to:

a. Upgrade of aging Tier 2 GPFS system. (In progress)

b. Upgrade to ASM system to add additional disk cache. (Completed)

c. Implementation to ASM tape analytics capability to monitor data integrity during transfers and as media ages. (Completed)

d. Implementation of a new HPC system. (In procurement)

e. Phase-out of old HPC systems.

The contractor shall develop installation and test plans **(Section F, Deliverable #36)** for the addition of new systems (hardware and/or software) or replacement of existing systems and shall support the implementation of these plans with system vendors and other stakeholders. The contractor shall plan for decommissioning equipment to be taken out of service and shall support the implementation of these plans with system vendors and other stakeholders **(Section F, Deliverable #37)**. Decommissioning includes return or relocation of equipment. The contractor shall conform to the Federal Property Management Regulations (FPMR) with respect to equipment returns. The contractor's plans shall identify and include coordination with other EPA organizations such as computer operations, telecommunications, security, facilities, other EHD or EPA contractors, and system vendors.

The contractor's installation of new systems shall include the development of configuration documents **(Section F, Deliverable #21)**, by component, and work instructions for operation of the new equipment. The contractor shall store these documents electronically in a system approved by EPA.

C.5.2.11   SUBTASK 2.11 - TRAINING AND ASSISTANCE

C.5.2.11.1   SUBTASK 2.11.1 - USER TRAINING AND ASSISTANCE

The contractor shall train and assist EPA staff and stakeholders in the use of HESC resources **(Section F, Deliverable #38)**. Resources include, but are not limited to, the HPC platform, visualization hardware, software, and related equipment, collaboration tools, and other customer-accessible systems under this TO. This includes the SSZ for Science and the Science File Transfer Protocol (FTP) Server. The contractor shall repeat training sessions as needed (e.g., training on differences in the use of new HPC systems, training on use of GPUs).

C.5.2.12   SUBTASK 2.12 - COLLABORATION

EHD created a SharePoint site called "High-End Scientific Computing" for researchers and others to report problems and find support documents. The contractor shall remediate problems reported via this SharePoint site or by other media **(Section F, Deliverable #39)**, and shall provide appropriately qualified resources to perform the following:

a. Contact the HESC user reporting collaboration problems to collect details and pursue a solution.

 b. Troubleshoot and determine solutions for the reported collaboration problems, including preparation of security and other OEI/EHD documentation (e.g., Service Restoration Requests). Where applicable, the contractor shall design a common solution for all applicable HESC users rather than just the individual reporting the problem. Examples of issues to be addressed and solutions recommended and implemented under this subtask include the following:

  1. Recommend and support available solutions (e.g., Web Proxy Server for Web browsing via non-standard ports, Application Proxy Server for access to approved libraries and databases, use of Science FTP server, etc.). The proxy servers are in an SSZ for ORD and are maintained under a separate TO.

  2. Provide remote access privileges using EPA-approved methods to trusted outside partners and contractors and EPA employees away from the office.

  3. Standardize the approval of requests to add libraries and databases accessed via the Application Proxy Server.

  4. Support the use of Agency-standard collaboration solutions (e.g., Adobe Connect, Go Anywhere).

 c. Track all OEI/EHD-required documentation through the approval process and provide status (**Section F, Deliverable #40**).

 d. Log all collaboration problems into the Agency's Service Desk ticketing system.

 e. Analyze reported collaboration problems and recommend collaboration enhancements.

C.5.2.13 SUBTASK 2.13 – SCIENCE FTP SUPPORT

The contractor shall support the Science FTP server and any follow on technology. This shall enable EPA scientists and collaborators, both internal and external, to securely share files related to their projects and their research. The contractor shall include (**Section F, Deliverable #41)** statistics of Science FTP use levels, accounts created, accounts deleted, and number of files and volume of data transferred.

Users are responsible for all data transfers. The contractor shall support users and any issues with the platform. Users will create collaborator accounts for authenticated access to those with whom they wish to share files.

C.5.2.14 SUBTASK 2.14 – DATA STORAGE AND MANAGEMENT

C.5.2.14.1 SUBTASK 2.14.1 – DATA STORAGE REQUIREMENTS/PLANNING

The contractor shall deliver a quarterly data storage trends report (**Section F, Deliverable #26)** with an 18-month projection of storage needs. The report shall include assumptions and estimates about users' future storage needs, assessment of changes in user behavior since the last reporting period, technology and product updates/trends, and recommendations on improvement to operations, equipment, and software.

C.5.2.14.2   SUBTASK 2.14.2 – DATA QUALITY ASSURANCE

The contractor shall support EPA's IT HPC Data Quality Assurance (QA) process. The contractor shall identify tapes that are going bad, move data on failing tapes to new tapes, and monitor library contents for tape degradation. This effort does not include scientific metadata and scientific data quality assurance, which is the responsibility of the data owners (i.e., the scientists and researchers who use the HPC and other HESC systems).

C.5.2.14.3   SUBTASK 2.14.3 – STORAGE MANAGEMENT TOOL USER TRAINING AND SUPPORT

The contractor shall train users on storage management component tools and processes in EHD's HPC environment (**Section F, Deliverable #38**).

The contractor shall support HPC storage management implementation. This support includes, but is not limited to, customers' efficient tool use and control of data growth on EHD HPC storage resources.

C.5.2.14.4   SUBTASK 2.14.4 – STORAGE MANAGEMENT PROCEDURES AND OPERATIONS

The contractor shall continuously improve storage management operations and documentation, recommending improvement at meetings with EPA (**Section F, Deliverable #42**). The contractor shall follow the Government's specifications. The contractor shall ensure full availability of user-accessible storage management functions.

The contractor shall format storage management documents that can be posted on a web page or the HESC SharePoint site. The contractor shall provide a schedule for document development and updates.

C.5.2.14.5   SUBTASK 2.14.5 – OFF-SITE STORAGE MANAGEMENT PROCEDURES AND OPERATIONS

The contractor shall develop and implement SOPs for transfers to tape and cataloging of backups of critical user files. The contractor shall send these tapes to an off-site storage facility and retrieve them when needed. The contractor shall document these processes/work instructions and store these processes/instructions with other such HESC documents (C.5.2.15.1). EHD will contract for pick up, storage, and retrieval of tapes to the NCC.

C.5.2.15   SUBTASK 2.15 – DOCUMENTATION

C.5.2.15.1   SUBTASK 2.15.1 – OPERATIONS AND STANDARD OPERATING PROCEDURES

The contractor shall update the HPC SOPs manual (**Section F, Deliverable #17**). The HPC SOPs manual shall enable HPC systems engineers to convey proper operational procedures to contractor personnel that monitor HPC systems and peripherals day-to-day. This manual shall provide an institutional memory and auditable document for the Government's oversight.

C.5.2.15.2   SUBTASK 2.15.2 – SCIENTIFIC COMPUTING USER GUIDE

The contractor shall update the HESC User Guide, which guides customers on basic procedures such as logging into HPC systems, running jobs, and contacting HESC support staff. The contractor shall publish this guide on the internal EPA web and/or other sites (e.g., SharePoint) and shall update it annually or when a significant system upgrade occurs, such as when a HPC system is added, expanded, or reconfigured (**Section F, Deliverable #16).**

C.5.2.15.3   SUBTASK 2.15.3 – HARDWARE AND SOFTWARE INVENTORY AND CONFIGURATION

The contractor shall prepare and maintain a listing of all the HESC computer hardware and software in the visualization lab, staff offices, and computing floor, in the Hardware and Software Configuration Status (**Section F, Deliverable #21).** This listing shall include summary configuration information. The contractor shall flag all records in the Hardware and Software Configuration Status that require maintenance. This report shall also include any Government-Furnished Property (GFP).

C.5.2.15.4   SUBTASK 2.15.4 – HARDWARE AND SOFTWARE UPDATES/ MODIFICATION PLANS

The contractor shall develop or update, as appropriate, plans to upgrade or reconfigure any significant features of the HESC hardware or software environment. (**Section F, Deliverable #21).**

C.5.2.15.5   SUBTASK 2.15.5 – SYSTEM DOCUMENTATION

The contractor shall develop or update, as appropriate, System Documentation, of the major compute and storage platforms used in the HESC environment (**Section F, Deliverable #18).** Besides the documentation provided by the OEM, the System Documentation shall also include configuration and other such information unique to each of these platforms. The information in the documentation should be adequate to enable a quick transition of System Administration functions from one System Administrator to another.

C.5.3   TASK 3 – HPC SPECIAL PROJECTS (WCF TZ PROJECTS)

Besides the core HPC infrastructure services and general customer support activities specified in Task 2, the contractor shall, when so directed, also support scientific computing special projects. Task 3 includes not only the HPC platform but all pre- and post-processing systems, visualization platforms, the ASM system, and the internal networking architecture. The contractor shall support all EPA scientists' and researchers' EHD HESC infrastructure requirements. Projects may require sporadic or brief support and may require special skill sets.

The Government will provide the contractor project support specifications using the Task Assignment Process (below).

Subsections C.5.3.2 through C.5.3.8 illustrate types of work required under Task 3.

C.5.3.1   SUBTASK 3.1 – TECHNICAL SPECIFICATIONS (TS)

TZs are services that are provided to EPA organizations under the WCF. The Government works with the contractor to develop specifications (**Section F, Deliverable #14**) including resource requirements and to apply all resources to the technical specifications. Services provided by the contractor under the following tasks fall under the TZ service:

> Task 3 - HPC Special Projects
>
> Task 4 - Centrally-Funded EMVL Projects and Activities
>
> Task 5 - Ad Hoc EMVL Projects

The same Assignment Process applies to Tasks 3, 4, and 5.

The Assignment Process is as follows:

a. The EHD TPOC will issue written Technical Specifications (TSs). Customers originate TSs.
b. Each TS issued under this process shall have a unique Assignment Number for tracking.
c. The contractor and the COR shall meet with the TPOC to clarify the specifications.
d. The contractor shall provide a Project Plan (**Section F, Deliverable #15**) detailing how it will meet those specifications.
e. The contractor shall identify staff and other resources to be allocated to the project in the Project Plan.
f. The TPOC will review the project plan and resource estimate with the end customer.
g. Once the TPOC and the end customer agree on the Project Plan, the TPOC and COR will convey a WCF Project Code to the contractor.
h. The TPOC and COR will review the project plan and either accept the plan so that the contractor can start work on the project with new WCF Project Code or provide the contractor with a summary of issues that need to be addressed prior to acceptance.
i. The contractor shall track all work approved under this process by Assignment Number, WCF Service Code, and Project Code.
j. The contractor shall report WCF costs for those WCF Project Codes.
k. The contractor shall report all work in the invoice backup file by Service Code and Project Code.

C.5.3.2   SUBTASK 3.2 – SCIENTIFIC SYSTEM REQUIREMENTS ANALYSIS

The contractor shall assist EPA organizations in determining HPC requirements for their scientific research. This support shall include assisting the organization in sizing their HPC requirements and identifying options for hardware, systems software, utilities, and applications. These options include requirements at the EHD or use of external providers of HPC resources, both Federal and private. This service provides EPA scientists and researchers the benefits of EHD's experience identifying scientific computing alternatives to enable environmental research. Support provided under this subtask shall be documented (**Section F, Deliverable #43**).

In addition, the contractor shall support options for incorporating scientific computing systems, regardless of location or organization, into a compute grid network or a data analytics framework. However, all data analytics and big data activities shall be coordinated with EPA's Chief Data Scientist's staff.

C.5.3.3   SUBTASK 3.3 – LEVERAGING ADVANCED SCIENTIFIC COMPUTING EXPERTISE

The contractor shall provide advanced scientific computing expert support for strategic and tactical analysis of scientific computing areas beyond traditional HPC and visualization. These areas include bioinformatics and complex systems biology, computational chemistry, grid computing, the use of GPUs and other coprocessors for parallel computing, cumulative risk assessment, big data/data analytics, and web applications and dashboards for delivering environmental science data **(Section F, Deliverable #44)**.

The contractor shall also provide expert support for projects and initiatives that leverage advances in scientific computing. The contractor shall provide expert support for short-term or intermittent projects.

C.5.3.4   SUBTASK 3.4 – GRID COMPUTING INFRASTRUCTURE SUPPORT

The contractor shall provide grid-enabled support to meet HESC users' requirements. The contractor shall implement, maintain, and support compute and data grid technology in a production environment **(Section F, Deliverable #45)**.

C.5.3.5   SUBTASK 3.5 – VISITS TO OTHER SITES TO ACCESS AND DEVELOP BEST PRACTICES

The contractor shall visit other scientific visualization and modeling sites, such as those operated by the Department of Energy, NASA, and Department of Defense. The contractor shall use these visits to assess best practices and apply any lessons learned to HESC services at the EHD. The contractor shall provide site visit trip reports **(Section F, Deliverable #6)**.

C.5.3.6   SUBTASK 3.6 – CLOUD COMPUTING SUPPORT

The contractor shall support scientific computing applications running on compute clouds to meet the needs of EPA researchers and collaborators. This includes supporting applications running on external HPC cloud computing resources. Computing resources also include HPC and other HESC compute and storage resources at other Government agencies **(Section F, Deliverable #46)**.

C.5.3.7   SUBTASK 3.7 – EMERGING TECHNOLOGIES

The contractor shall identify emerging scientific computing technologies that are candidates for technology evaluation/Research and Development (R&D). When so required, the contractor shall summarize how the emerging technology applies to EPA's HESC and supports EPA science **(Section F, Deliverable #47).**

C.5.3.8   SUBTASK 3.8 – SUMMARY REPORT FOR RESEARCH AND DEVELOPMENT EFFORTS

The contractor shall summarize HESC R&D to date and propose a vision for EPA HESC over the next two to five years. The contractor's vision statement shall propose innovative and possible future, alternative directions for scientific computing support. The vision shall be driven by major technological issues of the type discussed in the R&D reports. The vision shall discuss how major technological issues influence future directions of scientific computing at EPA. Additionally, the vision shall assess the impact of technological developments on the scope and content of EPA's HESC support (**Section F, Deliverable #48**).

The vision shall not concentrate solely on infrastructure enhancement but rather shall emphasize emerging technologies and their ability to support Agency initiatives and their use in setting future directions for HESC. The vision shall propose alternative scenarios.

C.5.4   TASK 4 – CENTRALLY FUNDED EMVL PROJECTS AND ACTIVITIES (WCF TZ PROJECTS)

The purpose of this task is to provide project-specific scientific visualization and computational science support to ORD scientists and researchers. ORD's Office of Science Information Management (OSIM) centrally funds these projects, which are allocated hours of EMVL support for each FY following the EPA's competitive project proposal evaluation process. By the beginning of each FY, the Government will notify the contractor of the projects that have been approved for support and the hours of support each one of the approved projects is allocated for that FY. EMVL support ranges across a wide area of research and includes, but is not limited to:

a. Air quality and emissions modeling.
b. Climate change modeling.
c. Groundwater simulations.
d. Water quality modeling.
e. CFD.
f. Computational chemistry.
g. Molecular modeling.
h. Human organ modeling.
i. Cellular and sub-cellular modeling.
j. Integrated (cross media) modeling.
k. Life-cycle assessment.
l. Susceptibility analysis.
m. Numerical algorithm design.
n. Web services and dashboards for the display and analysis of scientific information.
o. Support for the porting, tuning, optimizing, vectoring, and parallelizing of code.
p. Support for the development and management of scientific databases.

Integral to much of this work is the visualization component that allows scientists and decision-makers to interpret the results of model output and derive the full value of that work.

The contractor shall document the range of technical support and scientific visualization activities it has provided **(Section F, Deliverable #49)** and weekly status meetings.

For FY 2017, the projects supported under this task include the following:

a. Chemical Safety and Sustainability Dashboards for Decision Support (CSSDash)
b. Fugitive Source Measurements with Sensor Networks (Sentinel)
c. Estuary Data Mapper (ESTUARY)
d. Virtual Embryo: Simulation and Visualization (VEmbryo)
e. Coastal Eutrophication Model Development and Application to Managing Hypoxia in the Northern Gulf of Mexico (GULFBREEZE)
f. Sequence Alignment to Predict Across Species Susceptibility (Seqapass)
g. Development of a Three-dimensional Model of the Human Respiratory System for Dosimetric Use (LUNG)
h. Village Blue Community Water Quality Monitoring (VillBlue)
i. Quantitative Structure Relationship Methods and Model Development (QSARMMD)
j. Wind Tunnel and Computer Modeling of Building Downwash (BldgDown)
k. Real-Time Geospatial Data Viewer (RETIGO)
l. Remote Sensing Information Gateway (RSIG)
m. Smoke and Wildfire Human Health Application Development (Wildfire).

Section J, Attachment N, includes a summary description of EMVL projects for FY 2017. This listing includes information on the hardware and software used to support each of the projects and the staff-hours allocated. The website https://www.epa.gov/hesc provides more information about these projects, and includes links to fully functioning tools developed for these projects, such as RETIGO, RSIG, and EDM.

a. Attachment N, EMVL Projects with Summary Description – FY 2017
b. Attachment S, EMVL Project Support Requirements by Fiscal Year

C.5.4.1 SUBTASK 4.1 – TECHNICAL SPECIFICATIONS (TS)

TZs are services that are provided to EPA organizations under the WCF. The Government works with the contractor to develop specifications (**Section F, Deliverable #14**) including resource requirements and to apply all resources to the technical specifications.

Note, the same Assignment Process applies to Tasks 3, 4, and 5.

The Assignment Process is as follows:

a. The EHD TPOC will issue written Technical Specifications (TSs). Customers originate TSs.
b. Each TS issued under this process shall have a unique Assignment Number for tracking.
c. The contractor and the COR shall meet with the TPOC to clarify the specifications.

d. The contractor shall provide a Project Plan (**Section F, Deliverable #15**) detailing how it will meet those specifications.

e. The contractor shall identify staff and other resources to be allocated to the project in the Project Plan.

f. The TPOC will review the project plan and resource estimate with the end customer.

g. Once the TPOC and the end customer agree on the Project Plan, the TPOC and COR will convey a WCF Project Code to the contractor.

h. The TPOC and COR will review the project plan and either accept the plan so that the contractor can start work on the project with new WCF Project Code or provide the contractor with a summary of issues that need to be addressed prior to acceptance.

i. The contractor shall track all work approved under this process by Assignment Number, WCF Service Code, and Project Code.

j. The contractor shall report WCF costs for those WCF Project Codes.

k. The contractor shall report all work in the invoice backup file by Service Code and Project Code.

C.5.4.2 SUBTASK 4.2 – REQUIREMENTS, DELIVERABLES, SLAs, AND CONTRACTOR'S PROPOSAL AND PROJECT PLANS FOR CENTRALLY-FUNDED EMVL PROJECTS

Annually, the Government will provide the contractor with requirements, deliverables, hours allocated, and any applicable SLAs for each centrally funded EMVL project. The contractor shall provide a plan for each project that includes resource specifications (**Section F, Deliverable #50**). The plan shall include the contractor's approach to meeting the project requirements, the skill-mix required, estimated hours of each skill category, and a resource estimate. The project plan shall list key milestones and deliverables and target dates for completion/delivery. The Government will task the contractor to support the project(s) using the Task Assignment Process.

C.5.4.3 SUBTASK 4.3 – EXECUTE THE PROJECT

The contractor shall execute the project per the approved plan. The contractor shall not perform any work outside the project's scope unless the Government has approved a revised plan. Support of the project includes, but is not limited to:

a. Assigning appropriate staff skill mix for project requirements.

b. Executing the approved project plan.

c. Communicating with the TPOC and Principal Investigator (PI) to clarify tasks, discussing options and reporting progress or road blocks.

d. Preparing for and conducting project status meetings.

e. Monitoring project progress and reporting on issues with schedule and hours.

f. Completing milestones and documenting project progress.

g. Meeting all deliverable requirements.

    h.   Providing demos of work as directed by the Government.

    i.   Closing out the project.

C.5.4.4 SUBTASK 4.4 – GENERAL SUPPORT FOR CENTRALLY FUNDED PROJECTS

There are a number of activities that support all centrally funded EMVL projects. These general support activities are listed below.

C.5.4.4.1 SUBTASK 4.4.1 – MODELING AND VISUALIZATION DEMONTRATIONS AND TOURS

The contractor shall demonstrate its modeling and visualization work and how it supports EPA's mission. The contractor shall document these demonstrations (**Section F, Deliverable #51**). These demonstrations are in addition to any tied to a specific EMVL project.

C.5.4.4.2 SUBTASK 4.4.2 – EMVL OUTREACH SUPPORT

C.5.4.4.2.1 SUBTASK 4.4.2.1 – EMVL INFORMATIONAL SITE CONTENT MAINTENANCE

The contractor, working with the Government, shall maintain and update content on the EMVL intranet and internet web pages and other informational sites (e.g., SharePoint) IAW NCC Directives and Policies (**Section F, Deliverable #52**). The contractor shall adhere to NCC Directives for the establishment and maintenance of these sites' content. The contractor shall develop content relevant to EMVL projects and services for these sites.

C.5.4.4.2.2 SUBTASK 4.4.2.2 – OUTREACH MATERIALS

The contractor shall develop content and design for outreach materials that identify EMVL services and how to obtain them, as well as materials for particular projects, working with the customer and Operational Lead (**Section F, Deliverable #53**). These materials may be scientific/technical posters for conferences, visualizations, videos, demonstration modules, fact sheets, or backdrops for exhibit booths.

C.5.4.4.2.3 SUBTASK 4.4.2.3 – MAINTAIN AND ENHANCE DOCUMENT AND IMAGE LIBRARY

Due to frequent requests for EMVL documents, brochures, images, illustrations, posters, movies, and animations, EMVL created a searchable library of these products in the HESC SharePoint site. The contractor shall maintain and update this library (**Section F, Deliverable #54**). The contractor shall propose plans to enhance the usefulness of this library. Upon receiving approval, the contractor shall implement the approved plan.

C.5.4.4.2.4 SUBTASK 4.4.2.4 – DESIGN AND DEVELOPMENT OF PROJECT DEMONSTRATION MODULES

In consultation with the Operational Lead and relevant PIs, the contractor shall design and develop project demonstration modules for use in visualization demos **(Section F, Deliverable #55)**.

The Government will identify the projects the contractor shall use for these modules, and the contractor shall work on this task IAW the Operational Lead's specifications.

C.5.4.5 SUBTASK 4.5 – EMVL MEETING SUPPORT (QUARTERLY TECHNICAL INTERCHANGE MEETINGS)

The contractor shall schedule Technical Interchange Meetings (TIMs) **(Section F, Deliverable #56)**. The TIM will allow the Operational Lead and invited guests to meet with EMVL's project technical leads who shall present information, describe progress, and answer questions.

C.5.4.6 SUBTASK 4.6 – IMPROMPTU CUSTOMER CONSULTATION SUPPORT

The contractor shall, at the direction of the Operational Lead, provide impromptu customer support, such as for an EPA scientist or installing new scientific hardware or software useful for multiple projects **(Section F, Deliverable #57)**. In addition, potential customers may require brief consultation with staff before submitting their requirements.

C.5.5 TASK 5 – AD HOC EMVL PROJECTS (WCF TZ PROJECTS)

The purpose of this task is to support science-based projects that do not receive central funding or where the central funding allocated is inadequate to fully meet the EMVL project's support requirements. While many of the skill sets used to support other activities may be transferable to support this task, additional skill sets may also be needed.

Examples of ad hoc EMVL projects that were supported in FY 2016 include:

a. Dose Response Software Development and Maintenance – maintaining and developing additions to EPA risk assessment software particularly Benchmark Dose Software (BMDS) and CatReg (an R-based categorical regression analysis software).

b. Village Blue – This project uses data from U.S. Geological Survey (USGS) water sensors on the Jones Falls River near the Baltimore Water Wheel to provide measurements of chlorophyll a, conductivity, dissolved oxygen, nitrate, pH, phycocyanin, temperature, turbidity, tidal height, and discharge velocity. These data will be visualized in six-minute increments.

C.5.5.1 SUBTASK 5.1 – TECHNICAL SPECIFICATIONS (TS)

TZs are services that are provided to EPA organizations under the WCF. The Government works with the contractor to develop specifications **(Section F, Deliverable #14)** including resource requirements and to apply all resources to the technical specifications.

Note, the same Assignment Process applies to Tasks 3, 4, and 5.

The Assignment Process is as follows:

    a. The EHD TPOC will issue written Technical Specifications (TSs). Customers originate TSs.

    b. Each TS issued under this process shall have a unique Assignment Number for tracking.

    c. The contractor and the COR shall meet with the TPOC to clarify the specifications.

    d. The contractor shall provide a Project Plan (**Section F, Deliverable #15**) detailing how it will meet those specifications.

    e. The contractor shall identify staff and other resources to be allocated to the project in the Project Plan.

    f. The TPOC will review the project plan and resource estimate with the end customer.

    g. Once the TPOC and the end customer agree on the Project Plan, the TPOC and COR will convey a WCF Project Code to the contractor.

    h. The TPOC and COR will review the project plan and either accept the plan so that the contractor can start work on the project with new WCF Project Code or provide the contractor with a summary of issues that need to be addressed prior to acceptance.

    i. The contractor shall track all work approved under this process by Assignment Number, WCF Service Code, and Project Code.

    j. The contractor shall report WCF costs for those WCF Project Codes.

    k. The contractor shall report all work in the invoice backup file by Service Code and Project Code.

C.5.5.2 SUBTASK 5.2 – REQUIREMENT, DELIVERABLES, SLAs, AND CONTRACTOR'S PROPOSAL AND PROJECT PLAN

When a specific Ad Hoc EMVL project arises, the Government will provide the contractor a list of requirements, anticipated deliverables, and any applicable SLAs. The contractor shall then submit a project plan and required resource estimate (**Section F, Deliverable #58**). The project plan shall include a description of the contractor's approach to meeting the project requirement, the skill mix required, estimated hours of each skill category, a project plan, and a resource estimate including a detailed breakdown. The project plan shall also list key milestones and deliverables and target dates for completion/delivery. On receipt of an acceptable project plan, the COR will authorize the contractor to execute the plan.

C.5.5.3 SUBTASK 5.3 – EXECUTE THE PROJECT

The contractor shall execute the project per the approved plan. The contractor shall not perform work that differs from the plan unless the Government has approved a revised plan. Project support includes, but is not limited to:

    a. Assigning appropriate staff skill mix for project requirements.

    b. Executing the approved project plan.

    c. Communicating with the Operational Lead and PI to clarify tasks, discussing options, and reporting progress or road blocks.

    d. Preparing for project status meetings.

    e. Monitoring project progress and reporting on issues with schedule and hours.

    f. Completing milestones and document project progress.

    g. Meeting all deliverable requirements.

    h. Providing demos of work.

    i. Closing out the project.

Should revisions to the project plan be needed, they should be executed as soon as the need is identified. Any resource increase requires a plan revision that the EPA accepts. Project deliverables that are past due when the project plan is updated shall remain as past due for contractor evaluation purposes.

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E.1 PLACE OF INSPECTION AND ACCEPTANCE

Inspection and acceptance of all work performance, reports, and other deliverables under this TO will be performed by the FEDSIM COR and the client TPOC.

E.2 SCOPE OF INSPECTION

All deliverables will be inspected for content, completeness, accuracy, and conformance to TO requirements by the FEDSIM COR and/or EPA TPOC. Inspection may include validation of information or software through the use of automated tools, testing, or inspections of the deliverables, as specified in the TO. The scope and nature of this inspection will be sufficiently comprehensive to ensure the completeness, quality, and adequacy of all deliverables.

E.3 BASIS OF ACCEPTANCE

The basis for acceptance shall be in compliance with the requirements set forth in the TO, the contractor's proposal, and relevant terms and conditions of the contract. Deliverable items rejected shall be corrected in accordance with the applicable clauses.

The final acceptance will occur when all discrepancies, errors, or other deficiencies identified in writing by the Government have been resolved, through documentation updates, program correction, or other mutually agreeable methods.

Reports, documents, and narrative-type deliverables will be accepted when all discrepancies, errors, or other deficiencies identified in writing by the Government have been corrected.

If the draft deliverable is adequate, the Government may accept the draft and provide comments for incorporation into the final version.

All of the Government's comments on deliverables shall either be incorporated in the succeeding version of the deliverable, or the contractor shall explain to the Government's satisfaction why such comments should not be incorporated.

If the Government finds that a draft or final deliverable contains spelling errors, grammatical errors, or improper format, or otherwise does not conform to the quality assurance requirements stated within this TO, the document may be rejected without further review and returned to the contractor for correction and resubmission. If the contractor requires additional Government guidance to produce an acceptable draft, the contractor shall arrange a meeting with the COR.

All deliverables provided to the Government over an MSR reporting period shall be listed, by full name, in the MSR that follows that period. The MSR will be used as the acceptance instrument for all deliverables listed in the MSR. Any exceptions or rejections to any deliverables or their content will be provided to the EPA TPOC so that they can be disclosed when MSR approval is requested by the COR. The EPA Technical Performance Monitors will convene each month after delivery of the MSR and this forum will be used as a "last call" for any deliverable rejections with justification. If there are no causes for rejection against any deliverables listed in the MSR, to include the MSR, then the COR will provide written acceptance of the MSR. Any exceptions or rejections (with specific cause) are to be provided to the COR prior to acceptance of the MSR, no later than the third Tuesday of the month at the

Technical Monitor's meeting for that month. Exceptions or rejection of any deliverables will be handled IAW TO requirements.

E.4 WRITTEN ACCEPTANCE/REJECTION BY THE GOVERNMENT

The FEDSIM CO/COR will provide written notification of acceptance or rejection (Section J, Attachment J) of all final deliverables within 15 workdays (unless specified otherwise in Section F). All notifications of rejection will be accompanied with an explanation of the specific deficiencies causing the rejection.

E.5 NON-CONFORMING PRODUCTS OR SERVICES

Non-conforming products or services will be rejected. Deficiencies shall be corrected, by the contractor, within ten workdays of the rejection notice. If the deficiencies cannot be corrected within ten workdays, the contractor shall immediately notify the COR of the reason for the delay and provide a proposed corrective action plan within ten workdays.

E.6 ITERATIVE DEVELOPMENT

The contractor shall develop all documents and software deliverables in an iterative manner. The contractor shall provide informal, preliminary and interim outlines, annotated outlines, drafts and versions to the Government for review during development. Continuing adjustment and improvement will result from this process. The contractor may finalize and deliver deliverables prior to their due date and the Government will review such deliverables within two weeks of receipt.

F.1 PERIOD OF PERFORMANCE

The period of performance for this TO is a one-year base period and four, one-year options.

F.2 PLACE OF PERFORMANCE

The place of Performance is the EPA's NCC Building located in RTP, in the Raleigh-Durham area in NC. While the Government intends for work to be completed in RTP, NC there may be periods when this may not be possible. In those cases, the Government will authorize telework from approved locations.

Core Service Hours under this contract are between the hours of 7:00 a.m. and 6:00 p.m., Eastern Time, Monday through Friday, excluding Federal holidays. At least one staff member shall be onsite from 7:00 a.m. – 8:00 a.m. and from 5:00 p.m. – 6:00 p.m.

A staff member shall be immediately available on-call for critical HPC and CSIRC support between the hours of 6:00 p.m. and 7:00 a.m. local time.

Travel may be required outside of Raleigh-Durham during the performance of this contract to support activities such as EPA training, attending workshops and conferences, and meetings with project partners.

It is the Government's intent to provide Government-furnished space in EPA's NCC building to some of the contractor staff assigned to this TO. Currently, Government-furnished space expected to be available to staff on this TO is limited to eight office rooms and 15 cubicles. Additionally, there is one storage room, one shared general purpose room for the print, copier, and mail, and a specially-equipped Visualization Laboratory that can be scheduled/used by the contractor and Government staff for project meetings, presentations, visualization demos and group web-conferencing.

The Government may at any time during the period of performance of this contract increase or decrease the Government-furnished space assigned to contractor staff with appropriate advance notice.

When deciding on the assignment of Government-furnished space, the contractor shall consider it imperative to have some critical staff on site and other factors such as the extent of their need to use special-purpose equipment in the Visualization Laboratory, the frequency with which they have to work closely with their EPA customers at RTP, and the synergies that can result from co-locating on-site appropriate members of the HPC group and the EMVL consultant staff.

Subject matter experts (SMEs) with specific areas of expertise may be needed to staff special projects and may only be needed intermittently. The contractor shall consider the economics of options that include remote support and long-distance travel, both of which are possible under the TO, when staffing specialized and/or intermittent requirements.

F.3 TASK ORDER SCHEDULE AND MILESTONE DATES

The following schedule of milestones will be used by the FEDSIM COR to monitor timely progress under this TO.

The following abbreviations and definitions are used in this schedule:

IAW: In Accordance With

Maintain: Keep up–to-date continuously, within five workdays of change

N/A   Not Applicable

NLT: No Later Than

PS: Project Start

TOA: Task Order Award

Track: Keep up-to-date continuously, 24 x 7. For online systems, run continuously per SLAs.

WD/Day: Workday. All references to days, except as noted, are Government workdays.

Deliverables are due the next Government workday if the due date falls on a holiday or weekend.

Data Rights Clause* - Abbreviations in this column of the table below shall be interpreted as follows:

UR: Unlimited Rights, per FAR 27.404-1(a) and 52.227-14

RS: Restricted Software, per FAR 27.404-2 and 52.227-14

LD: Limited Rights Data, per FAR 27.404-2 and 52.227-14

SW: Special Works, per FAR 27.405-1 and 52.227-17

For software or documents that may be either proprietary COTS or custom, RS/LD rights apply to proprietary COTS software or documents and UR rights apply to custom software or documents. The Government asserts UR rights to open source COTS software. Any collateral agreements (within the meaning of FAR 52.227-14) proposed for data, regardless of the type of rights offered, shall be subject to the requirements of TOR Section H.11.1 and H.11.2. Additionally, RS/LD data shall be subject to the applicable requirements of TOR Section H.11.3. For purposes of the foregoing, the terms "collateral agreement", "Supplier Agreement" and "Commercial Supplier Agreement" have the same meaning.

The contractor may request and the Government may grant different or more restrictive rights, such as SW rights, than are depicted in the following table. The Government does not assert any rights to management software tools if the contractor does not plan to charge the Government directly for that tool and does not propose that the Government will own or use that tool, as discussed in H.11.4.

** The data rights associated with the software, data or services governed by these agreements shall be as set forth in the agreements, subject to the requirements of Section H.11.1 and H.11.2.

The contractor shall deliver the deliverables listed in the following table on the dates specified:

DEL. #	MILESTONE/ DELIVERABLE	TOR REFERENCE	PLANNED COMPLETION DATE	DATA RIGHTS CLAUSE*
Task 1 – Program Management				
1♦	PS	C.5.1.1	At TOA or when specified by the FEDSIM CO	UR
2♦	Kick-Off Meeting	C.5.1.1	NLT 10 WDs after TOA or as directed by the Contracting Officer	UR
3♦	MSR	C.5.1.2, H.4.1.b	NLT 10th WD of the subsequent month	UR
	Government Comments on MSR		4th Tuesday of the subsequent month	
4	Technical Status Meeting Agendas and Minutes	C.5.1.3	NLT the meeting (Agenda) Determination of need at onset of meeting (Minutes)	UR
5♦	Budget Briefings	C.5.1.5	IAW PMP	UR
6♦	Trip Reports	C.5.1.6, C.5.3.5	NLT 5 WDs after trip	UR
7♦	Copy of TO (initial award and all modifications)	F.4	NLT 10 WDs after TOA and 10 WDs after each modification	UR
8♦	Transition-In Plan	C.5.1.1.a, C.5.1.8	At Kick-Off Meeting	UR
9♦	Transition-Out Plan	C.5.1.9	NLT 90 calendar days prior to expiration of TO, updated as required	UR
10♦	PMP	C.5.1.1.c, C.5.1.4, C.5.1.4.1	At Kick-Off Meeting, then annually or when plans change	UR
11♦	QCP	C.5.1.1.d, C.5.1.4.e, C.5.1.7	Updated with PMP or when QC processes change	UR

DEL. #	MILESTONE/ DELIVERABLE	TOR REFERENCE	PLANNED COMPLETION DATE	DATA RIGHTS CLAUSE*
12♦	OCI Management Plan	C.5.1.1.g, H.5.1.c	Updated at Kick-Off Meeting and when circumstances change	UR
13	Section 508 Product Accessibility Report	H.6	NLT 20 WDs after TOA and upon system changes affecting the report	UR
Task 2 – HPC Core				
14	Technical Specifications	C.5.3.1, C.5.4.1, C.5.5.1	When Requested	UR
15	Project Plan (PP)	C.5.3.1, C.5.4.1, C.5.5.1	When Requested	UR
16♦	Technical User Guides	C.5.1.4, C.5.2.15.2	Annually and at HPC System Installation or Upgrade	LD (COTS); UR (Custom)
17♦	SOPs	C.5.2.15.1	At HPC System Installation or Upgrade	UR
18♦	System Documentation	C.5.2.15.5	At HPC System Installation or Upgrade	LD (COTS); UR (Custom)
19	Hardware/Software Updates/Modification Plans	C.5.2.15.4	Maintain	UR
20	Software, Compiled Code, and Application Libraries	C.5.2.3.1	Maintain	RS/LD (COTS); UR (Custom)
21	Configuration Documents, Work Instructions	C.5.2.3.1, C.5.2.10, C.5.2.15.3	Maintain	UR
22	New and Renewed Hardware and Software Maintenance Agreements (♦RIP)	C.5.2.3.1	Maintain	N/ A**

DEL. #	MILESTONE/ DELIVERABLE	TOR REFERENCE	PLANNED COMPLETION DATE	DATA RIGHTS CLAUSE*
23	Maintenance Issues in Problem Management and Change Management Systems	C.5.2.3.1	Track (Keep up to date continuously 24 x 7)	N/A
24	HPC And Scientific Systems Ongoing Support Report	C.5.2.3.1	NLT 10th WD of the subsequent month	UR
25	Security Enhancements and Activities Report	C.5.2.4	NLT 10th WD of the subsequent month	UR
26	Data Storage Trends Reports	C.5.2.14.1	Quarterly	UR
27	HPC Online System Availability and Use Monitoring	C.5.2.5	Track	N/A
28	Visualization Systems Maintenance and Monitoring	C.5.2.6	Track	N/A
29	HESC System Operations Log	C.5.2.7	Track	UR
30	HPC Operational Morning Reports	C.5.2.7	Daily, via email	UR
31	Monthly HPC Use Report	C.5.2.7	NLT 10th WD of the subsequent month	UR
32	HPC Operations Special Reports	C.5.2.7	On Request, NLT 5 WDs after request	UR
33♦	Annual Capacity Plan	C.5.2.8	Prior to the start of each FY	UR
34	HPC Acquisition Sourcing Package	C.5.2.9, H.10	When Required	UR
35	Equipment and Software Installation and De-installation	C.5.2.10	IAW Sourcing Package	N/A
36	Installation and Test Plans	C.5.2.10	IAW Sourcing Package	UR
37	Decommissioning Plan	C.5.2.10	When Required	UR
38	User Training and Assistance	C.5.2.11.1, C.5.2.14.3	When Required	For resulting data: LD (COTS); UR (Custom)

DEL. #	MILESTONE/ DELIVERABLE	TOR REFERENCE	PLANNED COMPLETION DATE	DATA RIGHTS CLAUSE*
39	Problems Reported on Collaboration SharePoint Site	C.5.2.12	Maintain	N/A
40	OEI/EHD Documents	C.5.2.12.c	NLT 10th WD of the subsequent month	UR
41	Science FTP Statistics	C.5.2.13	NLT 10th WD of the subsequent month	UR
42	Storage Management Operations	C.5.2.14.4	NLT 10th WD of the subsequent month	UR
Task 3 – HPC Special Projects				
43	Scientific Systems Requirements	C.5.3.2	NLT 10th WD of the subsequent month	UR
44	Advanced Scientific Computing Support	C.5.3.3	When Requested	UR
45	Grid Computing Support	C.5.3.4	When Requested	UR
46	Cloud Computing Support	C.5.3.6	When Requested	UR
47	Emerging Technologies	C.5.3.7	NLT 10th WD of the subsequent month	UR
48	HESC Vision Summary Report	C.5.3.8	When Requested	UR
Task 4 – EMVL WCF Projects				
49	EMVL Project Status	C.5.4	NLT 10th WD of the subsequent month	UR
50	EMVL WCF Project Plans	C.5.4.2	When Requested	UR
51	EMVL Demonstrations	C.5.4.4.1	NLT 10th WD of the subsequent month	UR
52	EMVL Site Content Maintenance	C.5.4.4.2.1	Maintain	UR
53	EMVL Outreach Materials	C.5.4.4.2.2	When Requested	UR
54	EMVL Document and Image Library	C.5.4.4.2.3	Maintain	UR
55	EMVL Project Demonstration Modules	C.5.4.4.2.4	When Requested	Meeting notes or other resulting data: UR
56	Technical Interchange Meetings (TIMs)	C.5.4.5	Quarterly	UR

DEL. #	MILESTONE/ DELIVERABLE	TOR REFERENCE	PLANNED COMPLETION DATE	DATA RIGHTS CLAUSE*
57	Impromptu Consultation Support	C.5.4.6	When Requested	UR
Task 5 – AD HOC EMVL WCF Projects				
58	Ad Hoc EVML WCF Project Plan	C.5.5.2	When Requested	UR

The contractor shall mark all deliverables listed in the above table to indicate authorship by contractor (i.e., non-Government) personnel; provided, however, that no deliverable shall contain any proprietary markings inconsistent with the Government's data rights set forth in this TO. The Government reserves the right to treat non-conforming markings IAW subparagraphs (e) and (f) of the FAR clause at 52.227-14.

Deliverables annotated with a "♦" in the "Milestone/Deliverable" column of the deliverable table is Section F.3 of the task order are considered hard (or core) deliverables where formal delivery and acceptance as outlined in Sections E.1 through E.5 and F.3 is to be followed. In addition, these core deliverables, once final, are to be maintained in a repository so that the EPA can access these documents as necessary. The current repository of record for EPA deliverables is the Service Tracking and Reporting (STAR) workflow tool. Deliverables without an "♦" are considered non-core deliverables and shall be delivered in accordance with Section F; however these deliverables will adhere to the specific protocol for inspection and acceptance of non-core deliverables as defined in the Project Management Plan in lieu of the protocol for inspection and acceptance of deliverables outlined in Sections E.1 through E.5. These non-core deliverables shall still be cited in the MSR.

F.4 PUBLIC RELEASE OF CONTRACT DOCUMENTS REQUIREMENT

The contractor agrees to submit, within ten workdays from the date of the FEDSIM CO's execution of the initial TO, or any modification to the TO (exclusive of Saturdays, Sundays, and Federal holidays), a portable document format (PDF) file of the fully executed document with all proposed necessary redactions, including redactions of any trade secrets or any commercial or financial information that it believes to be privileged or confidential business information, for the purpose of public disclosure at the sole discretion of GSA **(Section F, Deliverable #7)**. The contractor agrees to provide a detailed written statement specifying the basis for each of its proposed redactions, including the applicable exemption under the Freedom of Information Act (FOIA), 5 United States Code (U.S.C.) § 552, and, in the case of FOIA Exemption 4, 5 U.S.C. § 552(b)(4), shall explain why the information is considered to be a trade secret or commercial or financial information that is privileged or confidential. Information provided by the contractor in response to the contract requirement may itself be subject to disclosure under the FOIA. Submission of the proposed redactions constitutes concurrence of release under FOIA.

GSA will carefully consider all of the contractor's proposed redactions and associated grounds for nondisclosure prior to making a final determination as to what information in such executed documents may be properly withheld.

F.5 DELIVERABLES MEDIA

The contractor shall deliver all electronic versions by electronic mail (email) and removable electronic media, as well as by placing in the EPA's designated repository. The following are the required electronic formats, whose versions must be compatible with the latest version in use at the EPA at the time of delivery.

a. Text   MS Word
b. Spreadsheets   MS Excel
c. Briefings   MS PowerPoint
d. Drawings   MS Visio
e. Schedules   MS Project

The contractor shall deliver software and data deliverables in formats and media appropriate to the technical environments of their origin and use, and as jointly agreed by the contractor and Government.

F.6 PLACE(S) OF DELIVERY

Copies of all deliverables shall be delivered to the FEDSIM COR at the following address:

> GSA FAS AAS FEDSIM
> ATTN: Kent Taylor, Primary COR (QF0B)
> 1800 F Street, NW
> Washington, D.C. 20405
> Telephone: (202) 480-7302
> Email: kent.taylor@gsa.gov

Copies of all deliverables shall also be delivered to the EPA TPOC.

> William Lominack. Primary TPOC
> EPA National Computer Center
> 109 T.W. Alexander Drive
> Durham, NC 27709
> Telephone: 919-541-5461
> Email: lominack.william@epa.gov

F.7 NOTICE REGARDING LATE DELIVERY/PROBLEM NOTIFICATION REPORT (PNR)

The contractor shall notify the COR via a Problem Notification Report (PNR) (Section J, Attachment I) as soon as it becomes apparent to the contractor that a scheduled delivery will be late. The contractor shall include in the PNR the rationale for late delivery, the expected date for the delivery, and the project impact of the late delivery. The COR will review the new schedule and provide guidance to the contractor. Such notification in no way limits any Government contractual rights or remedies including, but not limited to, termination.

G.1   CONTRACTING OFFICER'S REPRESENTATIVE (COR)

The FEDSIM CO appointed a FEDSIM COR in writing through a COR Appointment Letter (Section J, Attachment A). The FEDSIM COR will receive, for the Government, all work called for by the TO and will represent the FEDSIM CO in the technical phases of the work. The FEDSIM COR will provide no supervisory or instructional assistance to contractor personnel.

The FEDSIM COR is not authorized to change any of the terms and conditions, scope, schedule, and price of the Contract or the TO. Changes in the scope of work will be made only by the FEDSIM CO by properly executed modifications to the Contract or the TO.

G.1.1   CONTRACT ADMINISTRATION

Contracting Officer:

> Bryan Keith
> GSA FAS AAS FEDSIM (QF0B)
> 1800 F Street, NW
> Washington, D.C. 20405
> Telephone: (703) 605-9283
> Email: bryan.keith@gsa.gov

Primary Contracting Officer's Representative:

> Kent Taylor, Primary COR (QF0B)
> GSA FAS AAS FEDSIM
> 1800 F Street, NW
> Washington, D.C. 20405
> Telephone: (202) 480-7302
> Email: kent.taylor@gsa.gov

Alternate Contracting Officer's Representative:

> Victor White, Alternate COR
> GSA FAS AAS FEDSIM (QF0B)
> 1800 F Street, NW
> Washington, D.C. 20405
> Telephone: (202) 308-8055
> Email: victor.white@gsa.gov

Technical Point of Contact:

> William Lominack. Primary TPOC
> EPA National Computer Center
> 109 T.W. Alexander Drive
> Durham, NC 27709
> Telephone: 919-541-5461
> Email: lominack.william@epa.gov

G.2 INVOICE SUBMISSION

The contractor shall submit Requests for Payments IAW the format contained in General Services Administration Acquisition Manual (GSAM) 552.232-25, PROMPT PAYMENT (NOV 2009), to be considered proper for payment. In addition, the following data elements shall be included on each invoice:

> Task Order Number: (from GSA Form 300, Block 2)
> Paying Number: (ACT/DAC NO.) (From GSA Form 300, Block 4)
> FEDSIM Project Number: EP00809
> Project Title: High-End Scientific Computing Support Services

The contractor shall certify with a signed and dated statement that the invoice is correct and proper for payment.

The contractor shall provide invoice backup data IAW the contract type, including detail such as labor categories, rates, and quantities of labor hours per labor category.

The contractor shall submit invoices as follows:

The contractor shall use FEDSIM's electronic Assisted Services Shared Information SysTem (ASSIST) to submit invoices. The contractor shall submit invoices electronically by logging onto the following link (requires Internet Explorer to access the link):

> https://portal.fas.gsa.gov

Log in using your assigned ID and password, navigate to the order against which you want to invoice, click the Invoices and Acceptance Reports link in the left navigator, and then click the *Create New Invoice* button. The AASBS Help Desk should be contacted for support at 877-472-4877 (toll free) or by email at AASBS.helpdesk@gsa.gov. By using this method, no paper copy of the invoice shall be submitted to GSA FEDSIM or the GSA Finance Center. However, the COR may require the contractor to submit a written hardcopy invoice with the client's certification prior to invoice payment. A paper copy of the invoice is required for a credit.

G.3 INVOICE REQUIREMENTS

The contractor may invoice the fixed fee on a monthly basis. The monthly fixed fee invoiced shall be proportionate to the amount of labor expended for the month invoiced.

The contractor shall submit a draft copy of an invoice to the client TPOC for review prior to its submission to GSA. The draft invoice shall not be construed as a proper invoice in accordance with FAR 32.9 and GSAM 532.9. The TPOC will review and provide any comments, revisions or concurrence to the draft invoice within three work days from the date the draft is received from the contractor.

The final invoice is desired to be submitted within six months of project completion. Upon project completion, the contractor shall provide a final invoice status update monthly.

Regardless of contract type, the contractor shall report the following:

a. GWAC Contract Number TBD
b. Task Order Award Number TBD

    c.   Contractor Invoice Number

    d.   Current period of performance.

    e.   Amount of invoice that was subcontracted.

    f.   Amount of invoice that was subcontracted to a small business.

G.3.1 COST-PLUS-FIXED-FEE (CPFF) TERM CLINs for LABOR

The contractor may invoice monthly on the basis of cost incurred for the CPFF TERM CLINs. The invoice shall include the period of performance covered by the invoice and the CLIN number and title. All hours and costs shall be reported by CLIN element (as shown in Section B), by contractor employee, and shall be provided for the current billing month and in total from project inception to date. The contractor shall provide the invoice data in spreadsheet form with the following detailed information. The listing shall include separate columns and totals for the current invoice period and the project to date.

    a.   Employee name (current and past employees)

    b.   Employee company

    c.   Employee Alliant labor category

    d.   Exempt or non-exempt

    e.   Monthly and total cumulative hours worked

    f.   Corresponding negotiated rate

    g.   Effective hourly rate

    h.   Fixed fee

    i.   Any cost incurred not billed

    j.   Labor adjustments (from any previous months (e.g., timesheet corrections))

    k.   Current approved billing rates in support of costs billed

All cost presentations provided by the contractor shall also include Overhead charges and General and Administrative charges at a minimum at the cost center level and shall also include the Overhead and General and Administrative rates being applied.

Each CPFF Labor invoice that includes labor expended for WCF projects shall be accompanied by backup documents showing the same information as in a. through k., above, and broken out by Assignment Number, Service Code and WCF Project Code as depicted in items j. and k. in the Assignment Process for Tasks 3, 4, and 5. The backup documents shall also show Overhead charges, General and Administrative charges and Fee by Assignment Number, Service Code and WCF Project Code. This information pertains to EPA's internal project tracking and is not part of the CLIN-level invoice that the contractor submits and GSA FEDSIM pays.

G.3.2 FIRM-FIXED-PRICE (FFP) CLINs

The contractor may invoice as stated in Section B for the FFP CLINs. The invoice shall include the period of performance covered by the invoice and the CLIN number and title. All prices shall be reported by CLIN element (as shown in Section B) and shall be provided for the current invoice and in total from project inception to date. The contractor shall provide the invoice data

in spreadsheet form with the following detailed information. The listing shall include separate columns and totals for the current invoice period and the project to date.

    a. FFP period of performance as stated in Section B

    b. Total Amount Paid (Lump Sum) by CLIN

G.3.3 ANCILLARY PRODUCTS AND SERVICES CLINs

The contractor may invoice monthly on the basis of cost incurred for the Ancillary Products and Services CLINs. The invoice shall include the period of performance covered by the invoice and the CLIN number and title. In addition, the contractor shall provide the following detailed information for each invoice submitted, as applicable. Spreadsheet submissions are required.

    a. Ancillary Products and Services purchased

    b. Request to Initiate Purchase (RIP) number or identifier, if the contractor has an approved purchasing system (as is required per H.10). Otherwise, a Consent To Purchase (CTP) number or identifier in the event that the contractor temporarily loses approval of the purchasing system after award. Note, purchases over the micropurchase threshold require a FEDSIM COR approved RIP or CTP. For purchases under the micropurchase level, the contractor shall coordinate via email with the FEDSIM COR.

    c. Date accepted by the Government

    d. Associated CLIN

    e. Project-to-date totals by CLIN

    f. Cost incurred not billed

    g. Remaining balance of the CLIN

All cost presentations provided by the contractor shall also include Overhead charges, General and Administrative charges and Fee in accordance with the contractor's Defense Contract Audit Agency (DCAA) cost disclosure statement.

Each Cost Reimbursable Ancillary Products/Services invoice that includes expenses for WCF projects shall be accompanied by backup documents showing the same information as in a. through d. plus f., above (excluding e. and g.), and broken out by Assignment Number, Service Code and WCF Project Code as depicted in items j. and k. in the Assignment Process for Tasks 3, 4, and 5. The backup documents shall also show Overhead charges, General and Administrative charges and Fee by Assignment Number, Service Code and WCF Project Code. This information pertains to EPA's internal project tracking and is not part of the CLIN-level invoice that the contractor submits and GSA FEDSIM pays.

G.3.4 TRAVEL

Contractor costs for travel will be reimbursed at the limits set in the following regulations (see FAR 31.205-46):

    a. Joint Travel Regulation (JTR) - prescribed by the GSA, for travel in the contiguous U.S.

    b. Federal Travel Regulation (FTR) Volume 2, Department of Defense (DoD) Civilian Personnel, Appendix A - prescribed by the DoD, for travel in Alaska, Hawaii, and outlying areas of the U.S.

The contractor may invoice monthly on the basis of cost incurred for cost of travel comparable with the JTR/FTR. The invoice shall include the period of performance covered by the invoice, the CLIN number and title. Separate worksheets, in MS Excel format, shall be submitted for travel.

CLIN Total Travel: This invoice information shall identify all cumulative travel costs billed by CLIN. The current invoice period's travel details shall include separate columns and totals and include the following:

a. Travel Authorization Request number or identifier, approver name, and approval date
b. Current invoice period
c. Names of persons traveling
d. Number of travel days
e. Dates of travel
f. Number of days per diem charged
g. Per diem rate used
h. Total per diem charged
i. Transportation costs
j. Total charges
k. Explanation of variances exceeding ten percent of the approved versus actual costs
l. Indirect handling rate

All cost presentations provided by the contractor shall also include Overhead charges and General and Administrative charges in accordance with the contractor's DCAA cost disclosure statement.

G.4 TASK ORDER CLOSEOUT

The Government will unilaterally close out the TO six years after the end of the TO period of performance if the contractor does not provide final DCAA rates by that time.

H.1 KEY PERSONNEL

The following are the minimum personnel who shall be designated as "Key." The Government does not intend to dictate the composition of the ideal team to perform this TO.

   a. Program Manager (PM)
   b. HPC Team Lead
   c. EMVL Team Lead

The Government desires that Key Personnel be assigned for the duration of the TO. It is not mandatory for Key Personnel to be assigned full-time for the duration. Key Personnel may be replaced or removed subject to Section H.1.4, Key Personnel Substitution.

H.1.1 PROGRAM MANAGER

It is desired that the PM has the following qualifications:

   a. Demonstrated competence with the following:
      1. Managerial experience providing technical advice, organizing, planning, directing and managing staff to ensure goals and objectives are achieved.
      2. Experience with the management and supervision of employees in a variety of labor categories and skills.
      3. Experience with risk management, issue resolution, problem solving, and customer service.
      4. Knowledge of system architectures and operations.
   b. At least five years of experience managing complex programs/contracts that feature significant HPC operations and HESC application support.
   c. At least five years of experience as a Systems Engineer or Systems Architect.
   d. Demonstrated excellent written and oral communications skills.

H.1.2 HPC TEAM LEAD

It is desired that the HPC Team Lead has the following qualifications:

   a. Experience managing HPC infrastructure of similar type, size, and complexity.
   b. Demonstrated skills and experience managing multiple projects concurrently.
   c. Ability to interact effectively with scientific teams using the services provided under this TO.
   d. Master's degree in science, engineering, business management or mathematics from an accredited graduate school.
   e. At least five years of experience managing large, complex, HPC installations and projects.

H.1.3 EMVL TEAM LEAD

It is desired that the EMVL Team Lead has the following qualifications:

a. Skills and experience to organize and lead highly-skilled, multi-disciplinary teams of scientific computing consultants and application developers for projects supporting a wide range of science research and code optimization.

b. Master's degree in science, engineering, business management or mathematics from an accredited graduate school.

c. At least five years of experience managing computing projects targeted to supporting the needs of scientific researchers.

H.1.4 KEY PERSONNEL SUBSTITUTION

The contractor shall not replace any personnel designated as Key Personnel without the written concurrence of the FEDSIM CO. Prior to using other than personnel specified in proposals in response to a Task Order Request (TOR), the contractor shall notify the FEDSIM CO and the FEDSIM COR of the existing TO. This notification shall be no later than ten calendar days in advance of any proposed substitution and shall include justification (including the Key Personnel Qualification Matrix and labor category of proposed substitution(s)) in sufficient detail to permit evaluation of the impact on TO performance.

Substitute personnel qualifications shall be equal to, or greater than, those of the person being substituted. If the FEDSIM CO and the FEDSIM COR determine that a proposed substitute person is unacceptable, or that the reduction of effort would be so substantial as to impair the successful performance of the work under the TO, the contractor may be subject to default action as prescribed by Federal Acquisition Regulation (FAR) 52.249-6 Termination (Cost Reimbursement).

H.2 GOVERNMENT-FURNISHED PROPERTY (GFP)

The GFP is listed in Section J, Attachments O, P and R.

H.3 GOVERNMENT-FURNISHED INFORMATION (GFI)

The GFI is listed in Section J, Attachments Q, S, U, V, W, X, Y, Z, and EE.

H.4 SECURITY REQUIREMENTS

a. The contractor shall conduct risk assessments(including electronic risk assessments), privacy threshold assessments, and privacy impact assessments (as required); develop security plans (e.g., facility and individual systems/applications); conduct certification and accreditation; implement continuous monitoring of security controls; conduct annual reviews of security controls; develop Plans of Action and Milestones (POA&Ms) as required for their applicable systems and services; and implement IRM-related data and physical security procedures. Risk assessments and security procedures shall conform to Agency and Federal regulations, policies, directives, standards, and procedures.

All contractor personnel participating in the design, development, operation, and/or maintenance of sensitive systems/applications, or having access to sensitive information are required to have an appropriate level of background screening. The contractor shall verify that the following minimum pre-screening requirements have been done for its personnel assigned to this contract:

1. Check of prior employment record.
2. Check of references.
3. Verification of claimed degrees/education/military service.
4. Verification of signed statement that the employee has never been convicted of a felony.

b. Costs for conducting the required personnel investigations will be paid by EPA. Investigations will be conducted IAW Office of Personnel Management (OPM) minimum investigations requirements. Forms required for conducting the screening will be provided to the contractor by the Task Order Project Officer (TOPO).

c. The level of screening required under the Office of Management and Budget (OMB) Circular A-130 varies from minimal checks (Standard Form (SF) 8SP, Questionnaire for Public Trust Positions) to full background investigations (SF 86, Questionnaire for National Security Positions) depending on the sensitivity of the information to be handled, and the risk and magnitude of loss or harm that could be caused by the individual.

d. The sensitivity of each position will be determined by the TO Project Officer and identified in the SOW for each TO. The contractor's Information Security Office (ISO) shall review all SF 85, for Public Trust positions or SF 86, National Security Positions for accuracy and completeness and deliver these form(s) to EPA's Technical Information Security Staff, Office of Technology Operations and Planning (OTOP), OEI within ten workdays after award of the TO or change in personnel. The contractor shall identify those individuals with a change in status (i.e., transferred, terminated, resigned, etc., within ten workdays to EPA's Technical Information Security Staff. The contractor shall identify those individuals not specifically identified by the SOW, if needed (i.e., Human Resources representative), and request their background investigations be adjudicated. Additional background checks (SF 86s) will be performed on all contractor and subcontractor employees who have access to Confidential Business Information (CBI), EPA financial data, (e.g., payroll), and data related to Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), Toxic Substances Control Act (TSCA), and Resource Conservation and Recovery Act (RCRA) CBI. Upon completion of the investigations, the TJSS shall provide written authorization to the contractor authorizing contractor and/or subcontractor employees access to sensitive information, including CBI via the contractor's ISO.

e. On- or off-site contractor technical or other support staff must receive appropriate training (i.e., user awareness training and training on Agency policy and procedures).

f. Government-Owned, Contractor-Operated (GOCO) facilities and laboratory and research facilities are Agency components and their security requirements are identical to those of the EPA in all respects. Security requirements for these facilities and resources include conducting privacy assessments, risk assessments (including electronic risk assessments), categorization of information, development and revision of security plans, certification and accreditation, continuous monitoring of security controls, annual reviews of security controls, development of POA&Ms, providing documentation and Government access to IT resources for oversight, and Independent Verification and Validation (IV&V) of security requirements. Corporate network, human resource, or financial management

systems would not be covered by FISMA requirements, provided the Agency has confirmed appropriate security of the interface between them and any system using Government information or those operating on behalf of the Agency. FISMA requirements would apply to any corporate information system using Government information. The contractor shall carefully map the accreditation boundary for these systems to ensure that Federal information: (a) is adequately protected, (b) is segregated from the contractor or other entity's infrastructure, and (c) there is an interconnection security agreement in place to address connections from the contractor containing the Agency information to systems external to the accreditation boundary (e.g., subcontractor's systems, etc.).

g. The contractor shall correct weaknesses discovered through self-assessments, reviews, IV&V activities, audits, and other independent assessments. Any weaknesses shall be reflected in the Agency's Automated System Security Evaluation and Remediation Tracking database POA&Ms. Statement on Auditing Standards (SAS) 70 assessments shall not suffice for independent reviews unless they conform to all requirements of FISMA and review and testing of security plan controls.

h. In acquiring IT equipment, including equipment incidental to the contract, the contractor shall ensure that Federal standards and required validations are complied with and that EPA and Federal common security configurations available from the National Institute of Standards and Technology's website at http://checklists.nist.gov are used. FISMA requirements apply to all equipment using Federal standards.

i. The contractor is required to insert terms that conform substantially to the language of this clause, including this paragraph, in all subcontracts under this Contract. The procedures for classifying subcontractor positions and obtaining clearance for subcontractor personnel shall be the same as those for contractor personnel.

H.4.1 PERSONNEL SECURITY

a. This TO is designated as an unclassified contract IAW EPA Office of Administration Policy Documents.

b. The contractor shall maintain a current list of all personnel working under this TO, including their security level, and provide EPA a copy of this list monthly, or whenever personnel change (**Section F, Deliverable #3**).

c. Contractor employees (both U.S. and non-U.S. citizens) who do not require access to EPA Restricted Office Space and/or access to national security information at the NCC, Durham, NC, will be allowed to work on the project without a security clearance.

d. However, EPA Personnel Security Branch is required to provide a limited investigation (Employment Authorization) and favorable adjudication of those contractor employees before they are permitted to perform under the TO. The provisions of EPA's National Security Information (NSI) Program apply in these circumstances. If an employee cannot be favorably adjudicated, the contractor shall remove the employee from the TO and submit a new applicant.

e. The contractor's Facility Security Officer (FSO) shall forward a valid Visit Authorization Letter (VAL) identifying their representatives/employees and the required security

clearance information to the EPA Office of Security via email: Personnel.Security@EPA.gov. A Joint Personnel Adjudication System (JPAS) (Joint Clearance and Access Verification System (JCAVS)) Person Summary Sheet must be included with the VAL.

f. If the contractor subcontracts any work under this TO, the contractor shall issue the security guidance provided by EPA Personnel Security Branch to any subcontractors and ensure that they comply with it at all times.

g. All contractors shall comply with Homeland Security Presidential Directive-12 (HSPD-12) before a building access badge is issued. Employees shall present two identification documents, one of which must be state or Federal-issued photo identification (ID). The process starts with the TPOC or local Bureau Administrative Management Staff Officer who will aid the contractor in getting enrolled into the identification process. The contractor shall ensure that all facility passes issued are returned upon termination of employment or completion of the TO, whichever occurs first.

H.4.2 OPERATIONAL SECURITY

The contractor shall:

a. Configure, implement, and maintain security of the environments IAW EPA security policy including configuration, patches, and access control.

b. Maintain systems in compliance with Agency-approved scanning tools.

c. Cooperate with continuous security monitoring of the environment including annual security assessments.

d. Assess risks to the availability, confidentiality, and integrity of systems.

e. Support the system security plan IAW EPA security policies ensuring updates include changes in technology.

f. Facilitate Technical Vulnerability Assessment (TVA) scans by outside parties, such as OEI, Office of Information Security and Privacy.

g. Respond to scans and TVAs by writing point-by-point responses to scan findings and by remediating any vulnerabilities found.

h. Maintain security data documenting breaches, issues, alerts, and status, including open issues, applicable alerts for each system, response to date, and tasks needed to complete response in EPA-provided central document repository.

i. Review, analyze, and implement necessary fixes to minimize security vulnerabilities in response to Computer Emergency Readiness Team (CERT) and/or other security advisories.

j. Capture, rotate, and review system activity logs daily (weekend logs reviewed the following Monday) to identify and investigate unusual and/or unauthorized use.

k. Implement data encryption systems and procedures for sensitive data.

l. Ensure compliance with applicable security policies, standards, and procedures, including, but not limited to, Federal (e.g., OMB, FISMA, EPA), and TO-specific requirements (e.g., applicable User Agreements).

m. Ensure compliance with controls and safeguards that are cost effective for supported systems.

n. Ensure contingency planning and provide contingency support for supported systems.

o. Implement applications and platform security plans relating to supported systems.

p. Monitor Standard Configuration and Audit Logs for resources and systems managed under this TO.

q. Establish and implement a central POC and backup for CSIRC alerts and incident remediation efforts.

H.4.3 INFORMATION ASSURANCE

The contractor may have access to sensitive (to include privileged and confidential) data, information, and materials of the U.S. Government. These printed and electronic documents are for internal use only and remain the sole property of the U.S. Government. Some of these materials are protected by the Privacy Act of 1974 (AMENDED) and Title 38. Unauthorized disclosure of Privacy Act or Title 38 covered materials is a criminal offense.

H.4.4 EPA SECURITY POLICIES

The contractor shall follow EPA security policies. These policies can be found at:
https://www.epa.gov/irmpoli8/current-information-directives

a. CIO 2104.0 Software Management and Piracy Policy

b. CIO 2130.1 Section 508: Accessible Electronic and Information Technology

c. CIO 2134.0 Information Collection Policy

d. CIO 2135.0 Enterprise Information Management Policy (EIMP)

e. CIO 2150.1 Interim Agency Network Security Policy

f. CIO 2150.3 Environmental Protection Agency Information Security Policy

g. CIO 2150.4 Mobile Computing Policy

h. CIO 2151.1 Privacy Policy

i. CIO 2155.1 Records Management Policy

j. CIO 2171.0 Information Access Policy

k. CIO 2180.1 Web Governance and Management

l. CIO 2181.0 Posting Copyrighted Works on EPA Web Site

m. CIO 2184.0 Social Media Policy

H.4.5 SAFEGUARDING SENSITIVE DATA AND INFORMATION TECHNOLOGY (IT) RESOURCES

During the course of performing the work stated within this SOW, contractor employees and staff may come in contact with CBI, law enforcement information, or other information considered sensitive. Examples of sensitive information include the following:

a. Identity of product inert ingredients.

b. Identity of product ingredient sources.

    c. Description of manufacturing or quality control processes and corresponding impurities.

    d. Product chemistry registration data.

    e. Information about pending registration actions.

    f. Sales, production, or other commercial or financial information.

The contractor shall protect all sensitive information from unauthorized disclosure. Neither the contractor nor any of its employees or affiliates shall disclose or disseminate any sensitive information that could result in, or increase the likelihood or possibility of, a breach of EPA's policies regarding its handling. The contractor shall ensure all sensitive information it comes in contact with during the performance of this TO is handled IAW EPA policy and procedures relating to sensitive information and the National Environmental Information Systems Engineering Center (NEISEC) security plan as it relates to the handling of sensitive information. Even if the FEDSIM COR decides no confidential information will be accessed on this TO, the contractor shall ensure all Agency information is safeguarded during the performance of this project IAW EPA information security policy and procedures, the security plan for this TO, and the NEISEC security plan as it relates to protecting EPA information resources.

The contractor shall also adhere to all physical and logical security requirements as identified in EPA Order 3210 - Physical Security Program. This requirement includes dissemination of information that might result in a negative impact to the government's reputation.

H.5   ORGANIZATIONAL CONFLICT OF INTEREST AND NON-DISCLOSURE REQUIREMENTS

H.5.1   ORGANIZATIONAL CONFLICT OF INTEREST (OCI)

    a. If the contractor is currently providing support or anticipates providing support that creates or represents an actual or potential OCI, the contractor shall immediately disclose this actual or potential OCI to the CO IAW FAR Subpart 9.5. The nature of the OCI may involve the prime contractor, subcontractors of any tier, or teaming partners.

    b. The contractor is required to complete and sign an OCI Statement (Section J, Attachment FF). The contractor must represent either that (1) It is not aware of any facts which create any actual or potential OCI relating to the award of this contract, or (2) It has included information in its proposal, providing all current information bearing on the existence of any actual or potential OCI and has included an OCI Management Plan in accordance with paragraph (e) below.

    c. In addition to the OCI Management Plan, the FEDSIM CO may require further information from the contractor. The FEDSIM CO will use all information submitted by the contractor, and any other relevant information known to GSA, to determine whether an award to the contractor may take place, and whether the OCI Management Plan adequately avoids, neutralizes, or mitigates the OCI.

    d. If any such conflict of interest is found to exist, the FEDSIM CO may determine that the conflict cannot be avoided, neutralized, mitigated or otherwise resolved to the satisfaction of the Government and the contractor may be found ineligible for award. Alternatively, the FEDSIM CO may determine that it is otherwise in the best interest of the United

States to contract with the contractor and include the appropriate provisions to avoid neutralize, mitigate, or waive such conflict in the contract awarded.

e. The contractor shall conform to the OCI Management Plan previously submitted with the Technical Proposal and as revised and accepted by the Government after TO award (**Section F, Deliverable #12**). The contractor shall revise the OCI Management Plan as needed and to mitigate any emerging potential or actual OCI and submit it to the Government for review throughout the Period of Performance.

H.5.2 NON-DISCLOSURE REQUIREMENTS

If the contractor acts on behalf of, or provides advice with respect to any phase of an agency procurement, as defined in FAR 3.104-4, then the contractor shall execute and submit a Corporate Non-Disclosure Agreement (NDA) Form (Section J, Attachment F) and ensure that all its personnel (to include subcontractors, teaming partners, and consultants) who will be personally and substantially involved in the performance of the TO:

a. Are listed on a signed Addendum to the NDA Form (Section J, Attachment F) prior to the commencement of any work on the TO.

b. Are instructed in the FAR 3.104 requirements for disclosure, protection, and marking of contractor bid or proposal information, or source selection information.

c. Are instructed in FAR Part 9 for third-party disclosures when acting in an advisory capacity.

All proposed replacement contractor personnel also must be listed on a signed Addendum to the Corporate NDA and be instructed in the requirements of FAR 3.104. Any information provided by contractors in the performance of this TO or obtained from the Government is only to be used in the performance of the TO. The contractor shall put in place appropriate procedures for the protection of such information and shall be liable to the Government for any misuse or unauthorized disclosure of such information by its personnel, as defined above.

H.6 SECTION 508 COMPLIANCE REQUIREMENTS

Unless the Government invokes an exemption, all Electronic and Information Technology (EIT) products and services proposed shall fully comply with Section 508 of the Rehabilitation Act of 1973, per the 1998 Amendments, 29 U.S.C. 794d, and the Architectural and Transportation Barriers Compliance Board's Electronic and Information Technology Accessibility Standards at 36 Code of Federal Regulations (CFR) 1194. The contractor shall identify all EIT products and services provided, identify the technical standards applicable to all products and services provided, and state the degree of compliance with the applicable standards. Additionally, the contractor must clearly indicate where the information pertaining to Section 508 compliance can be found (e.g., Vendor's or other exact web page location). The contractor must ensure that the list is easily accessible by typical users beginning at time of award.

H.7 COST ACCOUNTING SYSTEM

The adequacy of the contractor's accounting system and its associated internal control system, as well as contractor compliance with the Cost Accounting Standards (CAS), affect the quality and validity of the contractor data upon which the Government must rely for its management

oversight of the contractor and contract performance. The contractor's cost accounting system shall be adequate during the entire period of performance and shall permit timely development of all necessary cost data in the form required by the contract.

H.8 PURCHASING SYSTEMS

The objective of a contractor purchasing system assessment is to confirm it is a Government-approved purchasing system and evaluate the efficiency and effectiveness with which the contractor spends Government funds and complies with Government policy with subcontracting.

When reviews are conducted of the purchasing system, the contractor shall provide the results of the review to the FEDSIM CO within ten workdays from the date the results are known to the contractor.

H.9 TRAVEL

H.9.1 TRAVEL REGULATIONS

Contractor costs for travel will be reimbursed at the limits set in the following regulations (see FAR 31.205-46):

   a. Federal Travel Regulations (FTR) - prescribed by the GSA, for travel in the contiguous U.S.
   b. Joint Travel Regulations (JTR), Volume 2, Department of Defense (DoD) Civilian Personnel, Appendix A - prescribed by the DoD, for travel in Alaska, Hawaii, and outlying areas of the U.S.

H.9.2 TRAVEL AUTHORIZATION REQUESTS (TAR)

Before undertaking travel to any Government site or any other site in performance of this TO, the contractor shall have this travel approved by, and coordinated with, the FEDSIM COR. Notification shall include, at a minimum, the number of persons in the party, traveler name, destination, duration of stay, purpose, and estimated cost. Prior to any long-distance travel, the contractor shall prepare a TAR for Government review and approval (Section J, Attachment C). Long-distance travel will be reimbursed for cost of travel comparable with the FTR.

Requests for travel approval shall:

   a. Be prepared in a legible manner.
   b. Include a description of the travel proposed including a statement as to purpose.
   c. Be summarized by traveler.
   d. Identify the TO number.
   e. Identify the CLIN associated with the travel.
   f. Be submitted in advance of the travel with sufficient time to permit review and approval.

The contractor shall use only the minimum number of travelers and rental cars needed to accomplish the task(s). Travel shall be scheduled during normal duty hours whenever possible.

H.10 ANCILLARY PRODUCTS AND SERVICES

The Government may require the contractor to purchase hardware, software, and related supplies critical and related to the services being acquired under the TO. Such requirements will be identified at the time the TO is awarded or may be identified during the course of a TO by the Government or the contractor. If the contractor initiates a purchase within the scope of this TO and the contractor has an approved purchasing system, the contractor shall submit to the COR a RIP (Section J, Attachment E). The RIP shall include the purpose, specific items, estimated cost, cost comparison, and rationale. The contractor shall not make any purchases without an approved RIP from the FEDSIM COR or an approved CTP (Section J, Attachment D) from the FEDSIM CO and without complying with the requirements of Section H.11.2. **Section F, Deliverable #34.**

The prime contractor must possess a purchasing system approved by the Defense Contract Management Agency (DCMA) or another Government agency with equivalent authority.

Note, purchases over the micropurchase threshold require a FEDSIM COR approved RIP or CTP. For purchases under the micropurchase level, the contractor shall coordinate via email with the FEDSIM COR.

For every RIP or CTP that involves a commercial supplier agreement as defined in H.11, the contractor shall provide a copy of that agreement to the FEDSIM COR no later than the date that the contractor submits the RIP or CTP.

H.11 COMMERCIAL SUPPLIER AGREEMENTS

H.11.1 The Government understands that commercial software tools may be purchased in furtherance of this TO as described in Section C.5.2.9 and as contemplated in the Ancillary Products/Services CLINs in Section B.4 may be subject to commercial agreements which may take a variety of forms, including without limitation licensing agreements, terms of service, maintenance agreements, and the like, whether existing in hard copy or in an electronic or online format such as "clickwrap" or "browsewrap" (collectively, "Supplier Agreements"). For purposes of this TO, the Supplier Agreements are "collateral agreements" within the meaning of the FAR clause at 52.227-14.

H.11.2 The contractor shall ensure that any proposed Supplier Agreements allow the associated software and services to be used as necessary to achieve the objectives of this TO. Without limiting the generality of the foregoing, a compliant Supplier Agreement shall permit all of the following at no extra charge to the Government: (a) access and use by support contractors, including a successor contractor upon termination or expiration of this TO; (b) access and use by employees of other Federal, state and local law enforcement agencies; (c) transfer to a different data center and/or a successor contractor's cloud or grid; and (d) the creation of derivative works that shall be subject to at least the same rights as set forth in subparagraphs (a) through (c) above. The above rights constitute "other rights and limitations" as contemplated in subparagraph (d) of the FAR clause at 52.227-14, Rights In Data – General (May 2014), Alternate III (Dec 2007).

H.11.3   FREE AND OPEN SOURCE SOFTWARE

H.11.3.1   COMMERCIAL OPEN SOURCE SOFTWARE

For the purposes of this TO, open source software sold as a commercial product, such as open source software bundled with priced technical support services, is considered a commercial software tool and is subject to the terms of Sections H.11.1 and H.11.2.

Freeware, including open source and proprietary software that is not priced or sold, is not considered commercial software for the purposes of this TO.

H.11.3.2   FREE OPEN SOURCE SOFTWARE

The EPA and EHD currently use numerous free, open source software tools. It is permissible for the contractor to use free, open source software tools, provided that the EPA TPOC and FEDSIM COR approve this use in each case. The need for Government approval applies to both tools already in use by the EPA as well as tools newly proffered for use by the contractor. The terms of licenses for free, open source software must not be inconsistent with the terms of Sections H.11.1 or H.11.2.

H.11.3.3   FREE PROPRIETARY SOFTWARE

Proprietary software that the contractor initially proffers for use in this TO for free is also subject to Government approval. The contractor shall demonstrate that such software is adequately documented and supported technically for both the short and long term. Proprietary software that may in the future become priced or from which support may be withdrawn will be subject to the Government's disapproval and cannot be licensed for EPA use under this TO. The contractor may use free or priced (i.e., commercial) proprietary software during the TO period of performance, but is subject to Government evaluation if proffered in the Technical Proposal and is subject to ATO evaluation if installed on EPA HPC systems.

H.11.4   DEVELOPMENTAL, OPERATIONAL, AND MANAGEMENT SOFTWARE AGREEMENTS

The contractor may propose to use developmental software tools (tools that are used to design, build, test, optimize or maintain HPC models, data, or other applications) as well as operational tools (HPC models, data, or other applications).

For proposed free open source developmental and operational software, the contractor shall document the source of their maintenance, licensing terms, and technical documentation. The terms of licenses for free developmental and operational open source software must not be inconsistent with the terms of Sections H.11.1 and H.11.2 and must comply with Section H.11.3.2. Commercial (priced) developmental or operational tools, whether open source or proprietary, must fully comply with Sections H.11.1 and H.11.2.

The contractor may also propose open source or proprietary management software tools. Examples of management software tools might include a project management tool, a risk tracking tool, a tool used to track long-distance travel, or other tools used to manage or execute TO tasks but not used for HPC or model development or operations. If the contractor proposes to use a software tool for management purposes only (no developmental or operational use), does

not plan to charge the Government directly for that tool, and does not propose that the Government will own or use that tool, then it is not necessary to comply with Section H.11.2 for that tool. Management tools charged directly to the Government and/or proposed for Government ownership or use must fully comply with Sections H.11.1 and H.11.2.

H.11.5 LICENSE TRANSFER

The contractor shall ensure that any warranty, maintenance, or other software technical support services in effect as the end of the TO period of performance approaches is either already provided directly to the Government or else transferred to the party that the Government directs at the end of the period of performance (C.5.2.3.1).

H.12 NEWS RELEASE

The offeror shall not make any news release pertaining to this procurement without prior Government approval and only in coordination with the FEDSIM CO.

H.13 INTELLECTUAL PROPERTY RIGHTS

The existence of any patent, patent application or other intellectual property right that encumbers any deliverable must be disclosed in writing on the cover letter that accompanies the delivery. If no such disclosures are provided, the data rights provisions in FAR 52.227-14 apply.

H.14 COOPERATION WITH OTHER SUPPORT CONTRACTORS

When EPA awards or administers other contracts at its facilities, the contractor shall: (1) fully cooperate with other contractors and Government employees, and (2) carefully fit its own work to such other additional contracted work as directed by the FEDSIM COR or FEDSIM CO. The contractor shall not commit or permit any act that will interfere with the work awarded to other contractors. If the contractor interferes with any work under another contract, the contractor shall restore such work to its previous condition and obtain the FEDSIM COR's satisfaction of its efforts at no cost to the Government.

H.15 EPA CONFIDENTIALITY CLAUSES

H.15.1 1552.235-70 SCREENING BUSINESS INFORMATION FOR CLAIMS OF CONFIDENTIALITY

(a) Whenever collecting information under this contract, the contractor agrees to comply with the following requirements:

(1) If the contractor collects information from public sources, such as books, reports, journals, periodicals, public records, or other sources that are available to the public without restriction, the contractor shall submit a list of these sources to the appropriate program office at the time the information is initially submitted to EPA. The contractor shall identify the information according to source.

(2) If the contractor collects information from a State or local Government or from a Federal agency, the contractor shall submit a list of these sources to the appropriate program office at the

time the information is initially submitted to EPA. The contractor shall identify the information according to source.

(3) If the contractor collects information directly from a business or from a source that represents a business or businesses, such as a trade association:

(i) Before asking for the information, the contractor shall identify itself, explain that it is performing contractual work for the U.S. Environmental Protection Agency, identify the information that it is seeking to collect, explain what will be done with the information, and give the following notice:

(A) You may, if you desire, assert a business confidentiality claim covering part or all of the information. If you do assert a claim, the information will be disclosed by EPA only to the extent, and by means of the procedures, set forth in 40 CFR part 2, subpart B.

(B) If no such claim is made at the time this information is received by the contractor, it may be made available to the public by the Environmental Protection Agency without further notice to you.

(C) The contractor shall, IAW FAR Part 9, execute a written agreement regarding the limitations of the use of this information and forward a copy of the agreement to the Contracting Officer.

(ii) Upon receiving the information, the contractor shall make a written notation that the notice set out above was given to the source, by whom, in what form, and on what date.

(iii) At the time the contractor initially submits the information to the appropriate program office, the contractor shall submit a list of these sources, identify the information according to source, and indicate whether the source made any confidentiality claim and the nature and extent of the claim.

(b) The contractor shall keep all information collected from nonpublic sources confidential IAW the clause in this contract entitled "Treatment of Confidential Business Information" as if it had been furnished to the contractor by EPA.

(c) The contractor agrees to obtain the written consent of the Contracting Officer, after a written determination by the appropriate program office, prior to entering into any subcontract that will require the subcontractor to collect information. The contractor agrees to include this clause, including this paragraph (c), and the clause entitled "Treatment of Confidential Business Information" in all subcontracts awarded pursuant to this contract that require the subcontractor collect information.

H.15.2   1552.235-71 TREATMENT OF CONFIDENTIAL BUSINESS INFORMATION

(a) The Contracting Officer, after a written determination by the appropriate program office, may disclose confidential business information to the contractor necessary to carry out the work required under this contract. The contractor agrees to use the confidential information only under the following conditions:

(1) The contractor and contractor's Employees shall: (i) use the confidential information only for the purposes of carrying out the work required by the contract; (ii) not disclose the information to anyone other than EPA employees without the prior written approval of the Assistant General Counsel for Contracts and Information Law; and (iii) return to the Contracting Officer all copies

of the information, and any abstracts or excerpts therefrom, upon request by the Contracting Officer, whenever the information is no longer required by the contractor for the performance of the work required by the contract, or upon completion of the contract.

(2) The contractor shall obtain a written agreement to honor the above limitations from each of the contractor's employees who will have access to the information before the employee is allowed access.

(3) The contractor agrees that these contract conditions concerning the use and disclosure of confidential information are included for the benefit of, and shall be enforceable by, both EPA and any affected business having a proprietary interest in the information.

(4) The contractor shall not use any confidential information supplied by EPA or obtained during performance hereunder to compete with any business to which the confidential information relates.

(b) The contractor agrees to obtain the written consent of the Contracting Officer, after a written determination by the appropriate program office, prior to entering into any subcontract that will involve the disclosure of confidential business information by the contractor to the subcontractor. The contractor agrees to include this clause, including this paragraph (b), in all subcontracts awarded, pursuant to this contract, that require the furnishing of confidential business information to the subcontractor.

H.15.3   1552.235-73 ACCESS TO FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT CONFIDENTIAL BUSINESS INFORMATION (APR 1996)

In order to perform duties under the contract, the contractor will need to be authorized for access to FIFRA CBI. The contractor and all of its employees handling CBI while working under the contract will be required to follow the procedures contained in the security manual entitled "FIFRA Information Security Manual." These procedures include applying for FIFRA CBI access authorization for each individual working under the contract who will have access to FIFRA CBI, execution of confidentiality agreements, and designation by the contractor of an individual to serve as a Document Control Officer. The contractor will be required to abide by those clauses contained in EPAAR 1552.235–70, 1552.235- 71, and 1552.235–77 that are appropriate to the activities set forth in the contract.

Until EPA has approved the contractor's security plan, the contractor may not be authorized for FIFRA CBI access away from EPA facilities.

H.15.4   1552.235-75 ACCESS TO TOXIC SUBSTANCES CONTROL ACT CONFIDENTIAL BUSINESS INFORMATION (APR 1996).

In order to perform duties under the contract, the contractor will need to be authorized for access to TSCA CBI. The contractor and all of its employees handling CBI while working under the contract will be required to follow the procedures contained in the security manual entitled "TSCA Confidential Business Information Security Manual." These procedures include applying for TSCA CBI access authorization for each individual working under the contract who will have access to TSCA CBI, execution of confidentiality agreements, and designation by the contractor of an individual to serve as a Document Control Officer. The contractor will be required to abide

by those clauses contained in EPAAR 1552.235–70, 1552.235-71, and 1552.235–78 that are appropriate to the activities set forth in the contract.

Until EPA has inspected and approved the contractor's facilities, the contractor may not be authorized for TSCA CBI access away from EPA facilities.

H.15.5   1552.235-76 TREATMENT OF CONFIDENTIAL BUSINESS INFORMATION (APR 1996)

(a) The Project Officer (PO) or his/her designee, after a written determination by the appropriate program office, may disclose CBI to the contractor necessary to carry out the work required under this contract. The contractor agrees to use the CBI only under the following conditions:

(1) The contractor and contractor's employees shall (i) use the CBI only for the purposes of carrying out the work required by the contract; (ii) not disclose the information to anyone other than properly cleared EPA employees without the prior written approval of the Assistant General Counsel for Information Law or his/her designee; and (iii) return the CBI to the PO or his/her designee, whenever the information is no longer required by the contractor for performance of the work required by the contract, or upon completion of the contract.

(2) The contractor shall obtain a written agreement to honor the above limitations from each of the contractor's employees who will have access to the information before the employee is allowed access.

(3) The contractor agrees that these contract conditions concerning the use and disclosure of CBI are included for the benefit of, and shall be enforceable by, both EPA and any affected businesses having a proprietary interest in the information.

(4) The contractor shall not use any CBI supplied by EPA or obtained during performance hereunder to compete with any business to which the CBI relates.

(b) The contractor agrees to obtain the written consent of the CO, after a written determination by the appropriate program office, prior to entering into any subcontract that will involve the disclosure of CBI by the contractor to the subcontractor. The contractor agrees to include this clause, including this paragraph (b), in all subcontracts awarded pursuant to this contract that require the furnishing of CBI to the subcontractor.

H.15.6   1552.235-77   DATA SECURITY FOR FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT CONFIDENTIAL BUSINESS INFORMATIONS (DEC 1997)

The contractor shall handle FIFRA CBI IAW the contract clause entitled "Treatment of Confidential Business Information" and "Screening Business Information for Claims of Confidentiality," the provisions set forth below, and the contractor's approved detailed security plan.

(a) The PO or his/her designee, after a written determination by the appropriate program office, may disclose FIFRA CBI to the contractor necessary to carry out the work required under this contract. The contractor shall protect all FIFRA CBI to which it has access (including CBI used in its computer operations) IAW the following requirements:

SECTION H – SPECIAL CONTRACT REQUIREMENTS

(1) The contractor and contractor's employees shall follow the security procedures set forth in the FIFRA Information Security Manual. The manual may be obtained from the PO or the Chief, Information Services Branch (ISB), Program Management and Support Division, Office of Pesticide Programs (OPP) (H7502C), U.S. Environmental Protection Agency, 1200 Pennsylvania Ave., NW, Washington, DC 20460.

(2) The contractor and contractor's employees shall follow the security procedures set forth in the contractor's security plan(s) approved by EPA.

(3) Prior to receipt of FIFRA CBI by the contractor, the contractor shall ensure that all employees who will be cleared for access to FIFRA CBI have been briefed on the handling, control, and security requirements set forth in the FIFRA Information Security Manual.

(4) The contractor Document Control Officer (DCO) shall obtain a signed copy of the FIFRA "Contractor Employee Confidentiality Agreement" from each of the contractor's employees who will have access to the information before the employee is allowed access.

(b) The contractor agrees that these requirements concerning protection of FIFRA CBI are included for the benefit of, and shall be enforceable by, both EPA and any affected business having a proprietary interest in the information.

(c) The contractor understands that CBI obtained by EPA under FIFRA may not be disclosed except as authorized by the Act, and that any unauthorized disclosure by the contractor or the contractor's employees may subject the contractor and the contractor's employees to the criminal penalties specified in FIFRA (7 U.S.C. 136h(f)). For purposes of this contract, the only disclosures that EPA authorizes the contractor to make are those set forth in the clause entitled "Treatment of Confidential Business Information."

(d) The contractor agrees to include the provisions of this clause, including this paragraph (d), in all subcontracts awarded pursuant to this contract that require the furnishing of CBI to the subcontractor.

(e) At the request of EPA or at the end of the contract, the contractor shall return to the EPA PO or his/her designee all documents, logs, and magnetic media which contain FIFRA CBI. In addition, each contractor employee who has received FIFRA CBI clearance will sign a "Confidentiality Agreement for Contractor Employees Upon Relinquishing FIFRA CBI Access Authority." The contractor DCO will also forward those agreements to the EPA PO or his/her designee, with a copy to the CO, at the end of the contract.

(f) If, subsequent to the date of this contract, the Government changes the security requirements, the FEDSIM CO shall equitably adjust affected provisions of this contract, IAW the "Changes" clause when:

(1) The contractor submits a timely written request for an equitable adjustment; and

(2) The facts warrant an equitable adjustment.

H.15.7   1552.235-78 DATA SECURITY FOR TOXIC SUBSTANCE CONTROL ACT CONFIDENTIAL BUSINESS INFORMATION (DEC 1997)

The contractor shall handle TSCA CBI IAW the contract clause entitled "Treatment of Confidential Business Information" and "Screening Business Information for Claims of Confidentiality."

(a) The PO or his/her designee, after a written determination by the appropriate program office, may disclose TSCA CBI to the contractor necessary to carry out the work required under this contract. The contractor shall protect all TSCA CBI to which it has access (including CBI used in its computer operations) IAW the following requirements:

(1) The contractor and contractor's employees shall follow the security procedures set forth in the TSCA CBI Security Manual. The manual may be obtained from the Director, Information Management Division (IMD), Office of Pollution Prevention and Toxics (OPPT), U.S. Environmental Protection Agency (EPA), 1200 Pennsylvania Ave., NW, Washington, DC 20460. Prior to receipt of TSCA CBI by the contractor, the contractor shall ensure that all employees who will be cleared for access to TSCA CBI have been briefed on the handling, control, and security requirements set forth in the TSCA CBI Security Manual.

(2) The contractor shall permit access to and inspection of the contractor's facilities in use under this contract by representatives of EPA's Assistant Administrator for Administration and Resources Management, and the TSCA Security Staff in the OPPT, or by the EPA Project Officer.

(3) The Contractor DCO shall obtain a signed copy of EPA Form 7740–6, "TSCA CBI Access Request, Agreement, and Approval," from each of the contractor's employees who will have access to the information before the employee is allowed access. In addition, the contractor shall obtain from each employee who will be cleared for TSCA CBI access all information required by EPA or the U.S. Office of Personnel Management for EPA to conduct a Minimum Background Investigation.

(b) The contractor agrees that these requirements concerning protection of TSCA CBI are included for the benefit of, and shall be enforceable by, both EPA and any affected business having a proprietary interest in the information.

(c) The contractor understands that CBI obtained by EPA under TSCA may not be disclosed except as authorized by the Act, and that any unauthorized disclosure by the contractor or the contractor's employees may subject the contractor and the contractor's employees to the criminal penalties specified in TSCA (15 U.S.C. 2613(d)). For purposes of this contract, the only disclosures that EPA authorizes the contractor to make are those set forth in the clause entitled "Treatment of Confidential Business Information."

(d) The contractor agrees to include the provisions of this clause, including this paragraph (d), in all subcontracts awarded pursuant to this contract that require the furnishing of CBI to the subcontractor.

(e) At the request of EPA or at the end of the contract, the contractor shall return to the EPA PO or his/her designee, all documents, logs, and magnetic media which contain TSCA CBI. In addition, each contractor employee who has received TSCA CBI clearance will sign EPA Form

7740–18, "Confidentiality Agreement for Contractor Employees Upon Relinquishing TSCA CBI Access Authority." The contractor DCO will also forward those agreements to the EPA OPPT/IMD, with a copy to the CO, at the end of the contract.

(f) If, subsequent to the date of this contract, the Government changes the security requirements, the CO shall equitably adjust affected provisions of this contract, IAW the "Changes" clause, when:

(1) The contractor submits a timely written request for an equitable adjustment; and,

(2) The facts warrant an equitable adjustment.

H.15.8   1552.235-80 ACCESS TO CONFIDENTIAL BUSINESS INFORMATION (OCT 2000)

It is not anticipated that it will be necessary for the contractor to have access to CBI during the performance of tasks required under this contract. However, the following applies to any and all tasks under which the contractor will or may have access to CBI:

The contractor shall not have access to CBI submitted to EPA under any authority until the contractor obtains from the Project Officer a certification that the EPA has followed all necessary procedures under 40 CFR part 2, subpart B (and any other applicable procedures), including providing, where necessary, prior notice to the submitters of disclosure to the contractor.

H.16   ADDITIONAL GOVERNMENT STANDARDS AND GUIDELINES

Government standards and guidelines that apply to the TO include the following list of items.

1. EPA Information Technology Architecture Roadmap
2. EPA IRM Policy Manual
3. NCC Policy Manual
4. EPA Hardware and Software Standards
5. Revised OMB Circular 1-130, Appendix III
6. EPA Information Security Manual
7. NIST User Guide for Developing and Evaluating Security Plans for unclassified Federal Automated Information Systems (Draft)
8. EPA Web Workgroup Standards and Policies

H.17   IDENTITY ACCESS MANAGEMENT

The contractor shall notify the EPA TPOC and FEDSIM COR of any employee who has left the project. This notification is necessary so that the EPA TPOC and FEDSIM COR can cancel the employee's access to all data sets related to this TO. Failure to do so may be regarded as a breach of security if the EPA TPOC and FEDSIM COR are not notified by the last day of the employee's service

H.18   CPFF – TERM - LEVEL OF EFFORT

SECTION H – SPECIAL CONTRACT REQUIREMENTS

(a) The contractor agrees to provide the level of effort as specified in section B.X, Services and Prices/Costs, CPFF-TERM CLINs **0001, 1001, 2001, 3001, and 4001** in performance of this task order. The total LOE for the performance of this task order shall be _____ *(At time of award the Government will fill in from aggregate of section B).*

    i. Effort performed in fulfilling the level of effort obligations specified above shall only include effort performed in direct support of this task order and shall not include time and effort expended on such things as (local travel to and from an employee's usual work location), uncompensated effort while on travel status, truncated lunch periods, work (actual or inferred) performed outside of section F.X, Place of Performance, or location otherwise authorized under this task order, or other time and effort which does not have a specific and direct contribution to performance of this task order.

(b) The level of effort for this contract shall be expended at an average rate of approximately _____ *(At time of award the Government will insert average hours i.e. 40)* hours per week. It is understood and agreed that the rate of hours expended per month may fluctuate in pursuit of the technical objective, provided such fluctuation does not result in the use of the specified level of effort prior to the expiration of each term.

    i. If at any time the contractor finds it necessary to accelerate the expenditure of direct labor prior to the expiration of the term, the contractor shall notify the Contracting Officer in writing setting forth the acceleration required, the probable benefits which would result, and an offer to undertake the acceleration at no increase in the estimated cost or fee together with an offer, setting forth a proposed level of effort, cost breakdown, and proposed fee, for continuation of the work until expiration of the term hereof. The Contractor shall not accelerate any effort until receipt of such written approval by the Contracting Officer. Any agreement to accelerate will be formalized by contract modification.

    ii. The Contracting Officer may, by written order, direct the Contractor to accelerate the expenditure of direct labor. This order shall specify the acceleration required and the resulting revised term. The Contractor shall acknowledge this order within five days of receipt.

(c) The Government may adjust the fixed fee as a result of changes in work to be performed under this task order. Within 45 days after completion of the work under each separately identified CLINs' period of performance, the contractor shall submit in writing to the Contracting Officer and COR the total costs incurred and LOE expended by CLIN during the applicable period and a calculation of the appropriate fee reduction in accordance with following paragraphs:

(i)If the total level of effort specified in paragraph (a) above is not provided by the Contractor during the period of this contract, the Task Order Contracting Officer, at its sole discretion, shall either (i) reduce the fee of this contract as follows:

$$\text{Fee Reduction} = \frac{\text{Fee} \ (\text{Required LOE - Expended LOE})}{\text{Required LOE}}$$

(ii) subject to the provisions of the clause of this contract entitled "LIMITATION OF COST" (FAR 52.232-20), as applicable, require the Contractor to continue to perform the work until the total number of man-hours of direct labor specified in paragraph (a) above shall have been expended, at no increase in the fee of this contract.

(d) The terms and conditions of this section do not supersede the requirements of either FAR clause 52.232-20 "Limitation of Cost" or FAR clause 52.232-22 "Limitation of Funds.

(End of Clause)

I.1   FAR 52.252-2 CLAUSES INCORPORATED BY REFERENCE (FEB 1998)

I.1   TASK ORDER CLAUSES

All applicable and required provisions/clauses set forth in FAR 52.301automatically flow down to all Alliant task orders, based on their specific contract type (e.g., cost, fixed-price, etc.), statement of work, competition requirements, commercial or not commercial, and dollar value as of the date the TO is issued.

I.1.1   FAR 52.252-2 CLAUSES INCORPORATED BY REFERENCE (FEB 1998)

This TO incorporates one or more clauses by reference with the same force and effect as if they were given in full text. Upon request the FEDSIM CO will make their full text available. Also, the full text of a provision may be accessed electronically at the FAR website:

http://www.acquisition.gov/far/

FAR	TITLE	DATE
52.203-14	Display of Hotline Poster(s) (fill in or provide link to client's posters)	OCT 2015
52.204-7 (Provision)	System for Award Management	JUL 2013
52.204-13	System for Award Management Maintenance	JUL 2013
52.215-21	Requirements for Certified Cost or Pricing Data and Data Other than Certified Cost or Pricing Data – Modifications	OCT 2010
52.216-7	Allowable Cost and Payment	JUN 2013
52.216-8	Fixed Fee	JUN 2011
52.227-14	Rights in Data – General	MAY 2014
52.227-14	Rights In Data – General Alternate II and III	DEC 2007
52.227-15	Representation of Limited Rights Data and Restricted Computer Software	DEC 2007
52.227-17	Rights In Data Special Works	DEC 2007
52.227-21	Technical Data Declaration Revision and Withholding of Payment – Major Systems	MAY 2014
52.232-22	Limitation of Funds	APR 1985
52.232-40	Providing Accelerated Payments to Small Business Subcontractors	DEC 2013
52.246-5	Inspection of Services—Cost-Reimbursement	APR 1984
52.247-14	Contractor Responsibility for Receipt of Shipment	APR 1984

I.1.2 CLAUSES INCORPORATED BY FULL TEXT

52.216-7 Option for Increased Quantity -- Separately Priced Line Item (Mar 1989)

The Government may require the delivery of the numbered line item, identified in the Schedule as an option item, in the quantity and at the price stated in the Schedule. The Contracting Officer may exercise the option by written notice to the Contractor within 30 days. Delivery of added items shall continue at the same rate that like items are called for under the contract, unless the parties otherwise agree.

52.217-8 OPTION TO EXTEND SERVICES (NOV 1999)

The Government may require continued performance of any services within the limits and at the rates specified in the contract. These rates may be adjusted only as a result of revisions to prevailing labor rates provided by the Secretary of Labor. The option provision may be exercised more than once, but the total extension of performance hereunder shall not exceed 6 months. The Contracting Officer may exercise the option by written notice to the contractor within 30 days of the end of the period of performance.

(End of clause)

52.217-9 OPTION TO EXTEND THE TERM OF THE CONTRACT (MAR 2000)

a. The Government may extend the term of this contract by written notice to the contractor within 30 days; provided that the Government gives the contractor a preliminary written notice of its intent to extend at least 60 days before the contract expires. The preliminary notice does not commit the Government to an extension.
b. If the Government exercises this option, the extended contract shall be considered to include this option clause.
c. The total duration of this contract, including the exercise of any options under this clause, shall not exceed 66 months.

(End of clause)

52.247-67 -- Submission of Transportation Documents for Audit (FEB 2006)

a. The Contractor shall submit to the address identified below, for prepayment audit, transportation documents on which the United States will assume freight charges that were paid –

    (1) By the Contractor under a cost-reimbursement contract; and

    (2) By a first-tier subcontractor under a cost-reimbursement subcontract thereunder.

b. Cost-reimbursement Contractors shall only submit for audit those bills of lading with freight shipment charges exceeding $100. Bills under $100 shall be retained on-site by the Contractor and made available for on-site audits. This exception only applies to freight shipment bills and is not intended to apply to bills and invoices for any other transportation services.

    c. Contractors shall submit the above referenced transportation documents to the COR specified in Section G.

(End of clause)

I.2 GENERAL SERVICES ADMINISTRATION ACQUISITION MANUAL (GSAM), CLAUSES INCORPORATED BY REFERENCE

The full text of a provision may be accessed electronically at the GSAM website:

https://www.acquisition.gov/gsam/gsam.html/

GSAM	TITLE	DATE
552.204-9	Personal Identity Verification Requirements	OCT 2012
552.232.25	Prompt Payment	NOV 2009
552.232-39	Unenforceability of Unauthorized Obligations (FAR Deviation)	JUL 2015
552.232-78	Payment Information	JUL 2000
552.239-70	Information Technology Security Plan and Security Authorization	JUN 2011
552.239-71	Security Requirements for Unclassified Information Technology Resources	JAN 2012

I.2.1 GSAM CLAUSES INCORPORATED BY FULL TEXT

GSAM 552.232-39 UNFORCEABILITY OF UNAUTHORIZED OBLIGATIONS (JUL 2015)

    a. Except as stated in paragraph (b) of this clause, when any supply or service acquired under this contract is subject to any [commercial supplier agreement (as defined in 502.101)] that includes any [language, provision, or] clause requiring the Government to indemnify the Contractor or any person or entity for damages, costs, fees, or any other loss or liability that would create an Anti-Deficiency Act violation (31 U.S.C. 1341), the following shall govern:

        1. Any such [language, provision, or] clause is unenforceable against the Government.

        2. Neither the Government nor any Government authorized end user shall be deemed to have agreed to such clause by virtue of it appearing in the [commercial supplier agreement. If the commercial supplier agreement] is invoked through an "I agree" click box or other comparable mechanism (e.g., "click-wrap" or "browse-wrap" agreements), execution does not bind the Government or any Government authorized end user to such clause.

        3. Any such [language, provision, or] clause is deemed to be stricken from the [commercial supplier agreement].

b. Paragraph a of this clause does not apply to indemnification by the Government that is expressly authorized by statute and specifically authorized under applicable agency regulations and procedures.

(End of clause)

GSAM 552.232-78 COMMERCIAL SUPPLIER AGREEMENTS – UNENFORCEABLE CLAUSES (JUL 2015)

a. When any supply or service acquired under this contract is subject to a commercial supplier agreement, the following language shall be deemed incorporated into the commercial supplier agreement. As used herein, "this agreement" means the commercial supplier agreement:

1. Notwithstanding any other provision of this agreement, when the end user is an agency or instrumentality of the U.S. Government, the following shall apply:

    i. Applicability. This agreement is part of a contract between the commercial supplier and the U.S. Government for the acquisition of the supply or service that necessitates a license (including all contracts, task orders, and delivery orders not using FAR Part 12).

    ii. End user. This agreement shall bind the ordering activity as end user but shall not operate to bind a Government employee or person acting on behalf of the Government in his or her personal capacity.

    iii. Law and disputes. This agreement is governed by Federal law. (A) Any language purporting to subject the U.S. Government to the laws of a U.S. state, U.S. territory, district, or municipality, or foreign nation, except where Federal law expressly provides for the application of such laws, is hereby deleted. (B) Any language requiring dispute resolution in a specific forum or venue that is different from that prescribed by applicable Federal law is hereby deleted. (C) Any language prescribing a different time period for bringing an action than that prescribed by applicable Federal law in relation to a dispute is hereby deleted.

    iv. Continued performance. If the supplier or licensor believes the ordering activity to be in breach of the agreement, it shall pursue its rights under the Contract Disputes Act or other applicable Federal statute while continuing performance as set forth in 52.233-1 Disputes.

    v. Arbitration; equitable or injunctive relief. In the event of a claim or dispute arising under or relating to this agreement, (A) binding arbitration shall not be used unless specifically authorized by agency guidance, and (B) equitable or injunctive relief, including the award of attorney fees, costs or interest, may be awarded against the U.S. Government only when explicitly provided by statute (e.g., Prompt Payment Act or Equal Access to Justice Act).

    vi. Additional terms.

        a. This commercial supplier agreement may unilaterally incorporate additional terms by reference. Terms may be included by reference using electronic means (e.g., via web links, click and accept, etc.). Such terms shall be enforceable only to the extent that:

1. When included by reference using electronic means, the terms are readily available at referenced locations; and
2. Terms do not materially change Government obligations; and
3. Terms do not increase Government prices; and
4. Terms do not decrease overall level of service; and
5. Terms do not limit any other Government right addressed elsewhere in this contract.

   b. The order of precedence clause of this contract notwithstanding, any software license terms unilaterally revised subsequent to award that is inconsistent with any material term or provision of this contract is not enforceable against the Government.

vii. No automatic renewals. If any license or service tied to periodic payment is provided under this agreement (e.g., annual software maintenance or annual lease term), such license or service shall not renew automatically upon expiration of its current term without prior express Government approval.

viii. Indemnification. Any clause of this agreement requiring the commercial supplier or licensor to defend or indemnify the end user is hereby amended to provide that the U.S. Department of Justice has the sole right to represent the United States in any such action, in accordance with 28 U.S.C. 516.

ix. Audits. Any clause of this agreement permitting the commercial supplier or licensor to audit the end user's compliance with this agreement is hereby amended as follows: (A) Discrepancies found in an audit may result in a charge by the commercial supplier or licensor to the ordering activity. Any resulting invoice must comply with the proper invoicing requirements specified in the underlying Government contract or order. (B) This charge, if disputed by the ordering activity, will be resolved through the Disputes clause at 52.233-1; no payment obligation shall arise on the part of the ordering activity until the conclusion of the dispute process. (C) Any audit requested by the contractor will be performed at the contractor's expense, without reimbursement by the Government.

x. Taxes or surcharges. Any taxes or surcharges which the commercial supplier or licensor seeks to pass along to the Government as end user will be governed by the terms of the underlying Government contract or order and, in any event, must be submitted to the Contracting Officer for a determination of applicability prior to invoicing unless specifically agreed to otherwise in the Government contract.

xi. Non-assignment. This agreement may not be assigned, nor may any rights or obligations thereunder be delegated, without the Government's prior approval, except as expressly permitted under the clause at 52.232-23, Assignment of Claims.

xii. Confidential information. If this agreement includes confidentiality clause, such clause is hereby amended to state that neither the agreement nor the Federal Supply Schedule price list shall be deemed "confidential information." Issues regarding release of "unit pricing" will be resolved consistent with the Freedom

of Information Act. Notwithstanding anything in this agreement to the contrary, the Government may retain any confidential information as required by law, regulation or its internal document retention procedures for legal, regulatory or compliance purposes; provided, however, that all such retained confidential information will continue to be subject to the confidentiality obligations of this agreement.

2. If any provision of this agreement conflicts or is inconsistent with the preceding subparagraph (a)(1), the provisions of subparagraph (a)(1) shall prevail to the extent of such inconsistency.]

(End of clause)

I.3 DEPARTMENT OF HOMELAND SECURITY (DHS) ACQUISITION REGULATION SUPPLEMENTS (HSAR) CLAUSES INCORPORATED BY REFERENCE

The full text of a provision may be accessed electronically at HSAR website:

www.dhs.gov/publication/homeland-security-acquisition-regulation-deviations/

HSAR	TITLE	DATE
HSAR Class Deviation 15-01	Safeguarding of Sensitive Information	MAR 2015

J.1 LIST OF ATTACHMENTS

The following attachments are attached, either in full text or electronically at the end of the TOR.

Attachment	Title
A	COR Appointment Letter Victor White (primary)
AA	COR Appointment Letter Kent Taylor (alternate)
B	(Reserved)
C	Travel Authorization Request (TAR) Template (electronically attached .xls)
D	Consent to Purchase Template (electronically attached .xls)
E	Request to Initiate Purchase Template (electronically attached .xls)
F	Corporate NDA
G	Incremental Funding Chart CPFF (electronically attached .xls)
H	Acronym List
I	Problem Notification Report (PNR)
J	Deliverable Acceptance-Rejection Report
N	EMVL Projects with Summary Description 2017
O	Currently Supported HPC Systems
P	Major HPC Components and Interconnects
Q	FY 2017 Allocations (CPU-Hours)
R	Software Used On EPA's HPC Platform
S	EMVL Project Support Requirements by Fiscal Year
U	FY16 HPC Project Statistics
V	FY16 Archival Storage Statistics
W	HPC and Tape Archive Use by Month
X	Example HPC Project Proposal
Y	Example EMVL Project Proposal
Z	RFP for New HPC System
AA	(Reserved)
BB	(Reserved)
EE	Workload, Effort, and Frequency Estimates
FF	OCI Statement
GG	QASP

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CLIN	CLIN TYPE	FIXED PRICE or ESTIMATED COST	FIXED FEE	TOTAL ESTIMATED COST	FUNDED COST	FUNDED FIXED FEE
0001	FFP PM	(b) (4)		(b) (4)	(b) (4)	
0002	CPFF LABOR	(b) (4)	(b) (4)	(b) (4)	(b) (4)	(b) (4)
0003	TRAVEL	(b) (4)		(b) (4)	(b) (4)	
0004	ANCILLARY P/S	(b) (4)		(b) (4)	(b) (4)	
0005	CAF	(b) (4)		(b) (4)	(b) (4)	
SUB		(b) (4)	(b) (4)	$ 9,098,350	(b) (4)	(b) (4)
1001	FFP PM	(b) (4)		(b) (4)	(b) (4)	
1002	CPFF LABOR	(b) (4)	(b) (4)	(b) (4)	(b) (4)	(b) (4)
1003	TRAVEL	(b) (4)		(b) (4)	b) (4)	
1004	ANCILLARY P/S	(b) (4)		(b) (4)	(b) (4)	
1005	CAF	(b) (4)		(b) (4)	(b) (4)	
SUB		(b) (4)	(b) (4)	$ 10,569,207	(b) (4)	(b) (4)
2001	FFP PM	(b) (4)		(b) (4)	$ -	
2002	CPFF LABOR	(b) (4)	(b) (4)	(b) (4)	$ -	$ -
2003	TRAVEL	(b) (4)		(b) (4)	$ -	
2005	ANCILLARY P/S	(b) (4)		(b) (4)	$ -	
2006	CAF	(b) (4)		(b) (4)	$ -	
SUB		(b) (4)	(b) (4)	(b) (4)	$ -	$ -
3001	FFP PM	(b) (4)		(b) (4)	$ -	
3002	CPFF LABOR	(b) (4)	(b) (4)	(b) (4)	$ -	$ -
3003	TRAVEL	(b) (4)		(b) (4)	$ -	
3004	ANCILLARY P/S	(b) (4)		(b) (4)	$ -	
3005	CAF	(b) (4)		(b) (4)	$ -	
SUB		(b) (4)	(b) (4)	$ 12,942,980	$ -	$ -
4001	FFP PM	(b) (4)		(b) (4)	$ -	
4002	CPFF LABOR	(b) (4)	(b) (4)	(b) (4)	$ -	$ -
4003	TRAVEL	(b) (4)		(b) (4)	$ -	
4004	ANCILLARY P/S	(b) (4)		(b) (4)	$ -	
4005	CAF	(b) (4)		(b) (4)	$ -	
SUB		(b) (4)	(b) (4)	$ 14,020,990	$ -	$ -
TOTAL		(b) (4)	(b) (4)	$ 58,695,697	(b) (4)	(b) (4)

Analysis of CLIN 4002 discrepancy

As Awarded

4002   (b) (4)

As Submitted in the CSRA Cost Proposal

4002   (b) (4)

TOTAL FUNDED COST AND FEE	PRIOR FUNDED COST AND FEE (Prior Mod Sheet)	NEW FUNDING (Fill In)
(b) (4)	(b) (4)	(b) (4)
███	███	███
$ 7,853,279	$ 4,853,279	$ 3,000,000
(b) (4) ███		(b) (4) ███
	$ -	
	$ -	
	$ -	
	$ -	
$ 3,000,000	$ -	$ 3,000,000
$ -	$ -	$ -
$ -	$ -	$ -
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$ -	$ -	$ -
$ -	$ -	$ -
$ 10,853,279	$ 4,853,279	$ 6,000,000

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT	1. CONTRACT ID CODE		PAGE **1** OF **2**

2. AMENDMENT/MODIFICATION NO. **PS09**	3. EFFECTIVE DATE See Block 16C	4. REQUISITION/PURCHASE REQ. NO. **21434820**	5. PROJECT NO. (If applicable)

6. ISSUED BY	CODE	**47QFCA**	7. ADMINISTERED BY (If other than item 6)	CODE

6. ISSUED BY CODE **47QFCA**

GSA/FEDSIM Acquisition (QF0BCA)
1800 F Street, NW, 3100
Washington, DC 20405
Contract Specialist Name: Millicent Hawkins
Contract Specialist Phone: 703-605-3654

8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and ZIP Code)	(X)	9A. AMENDMENT OF SOLICITATION NO.
CSRA LLC **3170 FAIRVIEW PARK DR** **FALLS CHURCH, VA, 22042-4516** **Phone: (703) 641-2000 Fax: 619-225-2444**		9B. DATED (SEE ITEM 11)
	X	10A. MODIFICATION OF CONTRACT/ORDER NO. **GS00Q09BGD0025 / GSQ0017AJ0019**
		10B. DATED (SEE ITEM 13) **02/17/2017**

CODE	FACILITY CODE

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended, ☐ is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:
(a) By completing items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledge receipt of this amendment on each of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPEC FIED MAY RESULT N REJECTION OF YOUR OFFER. If by virtue of this amendment your desire to change an offer already submitted, such change may be made by telegram or letter provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and data specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)
285F.Q00FB000.AA10.25.AF151.H08   Total Amount of MOD: $0.00

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS.
IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
X	D. OTHER (Specify type of modification and authority) **FAR 52.243-1, Changes, Alternate II and Mutual Agreement of Both Parties**

E. IMPORTANT: Contractor ☐ is not, ☒ is required to sign this document and return _____ copies to he issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)
The purpose of this modification is to: 1) Update Task Order Section F.3, Deliverable #4; 2) Update Contracting Officer Representative (COR) in Task Order Sections F.6 and G.1.1; 3) Update Contracting Officer in Task Order Section G.1.1.; 4) Update Task Order Sections H.11.2 and H.11.3.1; and 5) Remove Clause GSAM Clause 552.212-4 and Add GSAM clauses 552.232-39 and 552.232-78 to Task Order Section I. See the attached SF 30 Continuation Pages and other award documents for details.

Except as provided herein, all terms and conditions of the document referenced in item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)	16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) **Nydia Roman-Albertorio**
15 (b) (6) (Signature of person authorized to sign)	16B. UNITE (b) (6)
15C. DATE SIGNED	16C. DATE SIGNED **04 April 2018**

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Previous edition unusable

STANDARD FORM 30 (REV. 10-83)
Prescribed by GSA FAR (48 CFR) 53 243

Line Item Summary

ITEM NO. (A)	SUPPLIES OR SERVICES (B)	QUANTITY ORDERED (C)	UNIT (D)	UNIT PRICE (E)	Rev. Ext. Price (F)	Prev. Ext. Price (G)	Amount Of Change (H)
0001	Labor (Task 1) FFP	1.0	Lot	(b) (4)	(b) (4)	(b) (4)	(b) (4)
0002	Labor (Tasks 2-5) CPFF	1.0	Lot				
0003	Long-Distance Travel Including Indirect Handling Rate (CR)	1.0	Lot				
0004	Ancillary Products/Services* Including Indirect Handling Rate (CR)	1.0	Lot				
0005	Contract Access Fee (CAF)	1.0	Lot				
1001	Labor (Task 1) FFP	1.0	Lot				
1002	Labor (Tasks 2-5) CPFF	1.0	Lot				
1003	Long-Distance Travel Including Indirect Handling Rate (CR)	1.0	Lot				
1004	Ancillary Products/Services* Including Indirect Handling Rate (CR)	1.0	Lot				
1005	Contract Access Fee (CAF)	1.0	Lot				
				TOTALS:	$10,853,279.00	$10,853,279.00	$0.00

The purpose of this modification is to: 1) Update Task Order Section F.3, Deliverable #4; 2) Update Contracting Officer Representative (COR) in Task Order Sections F.6 and G.1.1; 3) Update Contracting Officer in Task Order Section G.1.1.; 4) Update Task Order Sections H.11.2 and H.11.3.1; and 5) Remove Clause GSAM Clause 552.212-4 and Add GSAM clauses 552.232-39 and 552.232-78 to Task Order Section I.

1. Update the Task Order Section F.3, Deliverable #4 to read:

DEL. #	MILESTONE/ DELIVERABLE	TOR REFERENCE	PLANNED COMPLETION DATE	DATA RIGHTS CLAUSE*
4	Technical Status Meeting Agendas and Minutes	C.5.1.3	NLT the meeting (Agenda) Determination of need at onset of meeting (Minutes)	UR

2. Update COR Information.
    a. Updated COR information in Section F.6 as follows:
        Kent Taylor, Primary COR (QF0B)
        GSA FAS AAS FEDSIM
        1800 F Street, NW
        Washington, D.C. 20405
        Telephone: (202) 480-7302
        Email: kent.taylor@gsa.gov

    b. Update COR in Section G.1.1 as follows:
        Victor White is changed from Primary COR to Alternate COR.
        Kent Taylor is changed from Alternate COR to Primary COR

3. Update Contracting Officer (CO) in Task Order Section G.1.1 from Nydia Roman-Albertorio to Bryan Keith. Update CO information is as follows:

    Contracting Officer:
    Bryan Keith
    GSA FAS AAS FEDSIM (QF0B)
    1800 F Street, NW
    Washington, D.C. 20405
    Telephone: (703) 605-9283
    Email: bryan.keith@gsa.gov

4. Update Task Order Section H.11.2 to remove language related to Supplier Agreements and Update Section H.11.3.1 to remove GSAM FAR Deviation language.

5. Remove GSAM Clause 552.212-4 and add the following GSAM Clauses to Task Order Section I in Full Text:

    GSAM 552.232-39 UNFORCEABILITY OF UNAUTHORIZED OBLIGATIONS (JUL 2015).
    GSAM 552.232-78 COMMERCIAL SUPPLIER AGREEMENTS – UNENFORCEABLE CLAUSES (JUL 2015).

As a result of this modification, Task Ceiling remains unchanged at (b) (4) and the Task Order Funding remains unchanged at $10,853,279.

All changes in the conformed task order have been annotated by a bar in the right margin.

All other terms and conditions remain unchanged.